

# Naval Audit Service



## Audit Report



# Internal Controls Over Department of the Navy Energy Funding and Financing Tools

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**N2011-0023**  
**4 March 2011**

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MEMORANDUM FOR ASSISTANT SECRETARY OF THE NAVY, (ENERGY,  
INSTALLATIONS, AND ENVIRONMENT)  
COMMANDANT OF THE MARINE CORPS  
COMMANDER, NAVAL FACILITIES ENGINEERING  
COMMAND

Subj: **INTERNAL CONTROLS OVER DEPARTMENT OF THE NAVY  
ENERGY FUNDING AND FINANCING TOOLS (AUDIT REPORT  
N2011-0023)**

Ref: (a) NAVAUDSVC memos 7510/N2010-NIA000-0037, dated 24 Nov 09;  
7510/N2010-NIA000-0114, dated 12 Jan 10; 7510/N2010-NIA000-0125,  
dated 30 Apr 10  
(b) SECNAV Instruction 7510.7F, "Department of the Navy Internal Audit"

1. The report provides results of the subject audit announced in reference (a). Section A of this report provides our finding and recommendations, summarized management responses, and our comments on the responses. Section B provides the status of the recommendations. The full text of management responses is included in the Appendices.

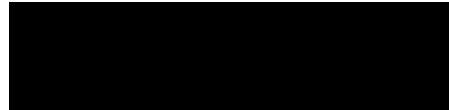
2. Actions planned by the office of the Assistant Secretary of the Navy (Energy, Installations, and Environment), Commandant of the Marine Corps, and Commander, Naval Facilities Engineering Command meet the intent of the recommendations. The recommendations are considered open pending completion of the planned corrective actions, and are subject to monitoring in accordance with reference (b). Management should provide a written status report on the recommendations within 30 days after target completion dates. Please provide all correspondence to the Assistant Auditor General for Installations and Environment Audits, XXXXXXXXXXXXX, by e-mail at XXXXXXXXXXXXXXXXXXXX, with a copy to the Director, Policy and Oversight, XXXX XXXXXXXXXXXXXXXXXXXX. Please submit correspondence in electronic format (Microsoft Word or Adobe Acrobat file), and ensure that it is on letterhead and includes a scanned signature.

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Subj: **INTERNAL CONTROLS OVER DEPARTMENT OF THE NAVY  
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N2011-0023)**

3. Any requests for this report under the Freedom of Information Act must be approved by the Auditor General of the Navy as required by reference (b). This audit report is also subject to followup in accordance with reference (b).

4. We appreciate the cooperation and courtesies extended to our auditors.



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Assistant Auditor General

Installations and Environment Audits

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## Section A:

# Finding, Recommendations, and Corrective Actions

## Finding: Management of Energy Projects

### Overview

Executive Orders, Congressional enactments, and other directives specify energy efficiency, renewable energy use, and water conservation goals for Federal agencies and facilities. For example, Executive Order 13423 and the Energy Independence and Security Act of 2007 each direct Federal agencies to reduce energy use by:

- 3 percent annually through the end of Fiscal Year 2015; or
- 30 percent by the end of Fiscal Year 2015 relative to the Fiscal Year 2003 baseline.

To address such energy mandates, the Department of the Navy (DON) utilizes Government funds, including the Energy Conservation Investment Program, and financing tools, such as Energy Savings Performance Contracts and Utility Energy Services Contracts. These tools allow contracting for energy projects and implementation of energy conservation measures as directed by the Executive Office of the President's Council on Environmental Quality Memorandum, dated 3 August 2007, Department of Defense (DoD) Instruction 4170.11, and Secretary of the Navy Instruction 4100.9A.

We performed three audits, reviewing 104 DON energy projects utilizing the Energy Conservation Investment Program, Energy Savings Performance Contracts, and Utility Energy Services Contracts.<sup>1</sup> We began the audits of the DON Energy Conservation Investment Program, Energy Savings Performance Contracts, and Utility Energy Services Contracts between 24 November 2009 and 30 April 2010, and performed the audit work through 22 December 2010. Due to the similar results of each audit, we combined the audit results into one report.

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<sup>1</sup> Each energy funding/financing method can include one or several energy conservation measures. Please see Exhibit F for a listing of energy conservation measures included under each funding/financing tool reviewed.

## Reason for Audit and Conclusion

The overall objective was to verify that the DON Energy Conservation Investment Program, Energy Savings Performance Contract, and Utility Energy Services Contract energy projects provided an acceptable return on investment and that Energy Savings Performance Contract and Utility Energy Services Contract energy projects have generated sufficient savings from energy reductions to pay all contract costs.

These audits were requested by senior DON management and were three of four audits related to energy performed through Fiscal Year 2010.<sup>2</sup> We identified opportunities for DON to improve management of DON energy projects. Specifically, we found that energy projects utilizing the Energy Conservation Investment Program, Energy Savings Performance Contracts, and Utility Energy Services Contracts were not effectively managed to verify energy reductions and cost savings.

## Noteworthy Accomplishments

As a result of the information that we provided, Naval Facilities Engineering Command personnel took immediate action and began internal coordination with the Energy Program Management Office and Public Works Business Line, Utilities and Energy Management to develop guidance regarding performance verification for non- Energy Savings Performance Contract energy projects. Additionally, a Naval Facilities Engineering Command working group is progressively working to improve their internal process for managing energy projects.

## Communication with Management

Throughout the audit, we kept Marine Corps and Naval Facilities Engineering Command personnel informed of the conditions noted.

### Energy Conservation Investment Program

We provided a point paper documenting the preliminary results and recommendations to the Program Managers for the Marine Corps, Naval Facilities Engineering Command Southwest, and Naval Facilities Engineering Service Center on 23 August 2010. Additionally, we met with the energy efficiency and contracting personnel at Naval and Marine Corps bases within the Naval Facilities Engineering Command Southwest region to discuss the preliminary results of the audit between 16 March and 23 August 2010.

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<sup>2</sup> The fourth energy audit included a review of the DON Geothermal Energy Program.

### **Energy Savings Performance Contracts**

We provided a point paper documenting the preliminary results and recommendations to the Naval Facilities Engineering Service Center Public Works Department Head on 17 June 2010. We discussed the preliminary finding and recommendations with Naval Facilities Engineering Command's Deputy, Public Works Business Line and Service Center personnel on 30 June 2010.

### **Utility Energy Services Contracts**

Between 20 January and 29 April 2010, we met with the Executive Officers of Facilities Engineering Commands Washington, DC, Southwest, Southeast, Mid-Atlantic, and Midwest, as well as the Public Works Business Line Coordinator of Facilities Engineering Command Northwest to discuss the preliminary results for the Utility Energy Services Contract projects reviewed. We discussed the preliminary finding and recommendations with Naval Facilities Engineering Command's Deputy Public Works Business Line, and Service Center personnel on 30 June 2010. Also, we provided a draft Utility Energy Services Contract finding to the Utilities and Energy Management Product Line Energy Operations Manager on 2 August 2010.

### **All Energy Audits**

As the audit results were solidified, we briefed the preliminary results to Deputy Assistant Secretary of the Navy (Energy), Headquarters Naval Facilities Engineering Command and Headquarters Marine Corps personnel between 11 May 2010 and 26 August 2010. We briefed Naval Facilities Engineering Command's Director, Energy Program Management Office; Assistant Commander for Public Works; Public Works Business Line Operations Manager (Acting); and Utilities and Energy Management Product Line Leader on 11 May 2010. We also briefed the preliminary results and recommendations to Headquarters Marine Corps personnel on 25 May 2010 and 7 June 2010. We met with Naval Facilities Engineering Command's Assistant Commander for Public Works; Deputy, Public Works Business Line; Public Works Business Line Operations Manager (Acting); and Utilities and Energy Management Program Analyst on 21 June 2010. Additionally, we briefed the Deputy Assistant Secretary of the Navy (Energy) on 23 July 2010; and the Deputy Director for the Deputy Assistant Secretary of the Navy (Energy), Naval Facilities Engineering Command's Public Works Business Line Operations Manager (Acting); Naval Facilities Engineering Command's Utilities and Energy Management Product Line Energy Operations Manager; and Head, Special Programs Section, Headquarters Marine Corps on 26 August 2010.

## **Federal Managers' Financial Integrity Act**

The Federal Managers' Financial Integrity Act of 1982, as codified in Title 31, United States Code, requires each Federal agency head to annually certify the effectiveness of the agency's internal and accounting system controls. Recommendations 1 through 11 address issues related to the internal controls over DON energy funding and financing tools. In our opinion, the weaknesses noted in this report may warrant reporting in the Auditor General's annual Federal Manager's Financial Integrity Act memorandum identifying management control weaknesses to the Secretary of the Navy.

## **Synopsis**

DON has consistently identified and executed energy projects in an effort to reduce energy consumption and increase efficiency in order to comply with energy mandates. We identified opportunities to improve the management of DON energy projects that utilized the Energy Conservation Investment Program, Energy Savings Performance Contracts, and Utility Energy Services Contracts. Specifically, DON did not effectively manage these projects in order to verify energy reductions and cost savings in accordance with established guidance. Overall, this condition occurred because DON did not provide sufficient oversight over the Energy Conservation Investment Program, Energy Savings Performance Contract, and Utility Energy Services Contract projects in the areas of performance assurance, validation processes, reporting processes, and/or project documentation. As a result, DON does not have reasonable assurance that the Energy Conservation Investment Program projects provided an acceptable return on investment, and that Energy Savings Performance Contract, and Utility Energy Services Contract projects achieved sufficient savings from energy reductions to pay all contract costs.

## **Audit Results**

We found opportunities to improve the management of DON energy projects in order to achieve an acceptable return on investment through a review of 104 DON energy projects,<sup>3</sup> utilizing the Energy Conservation Investment Program, Energy Savings Performance Contracts, and Utility Energy Services Contracts for Fiscal Years 1997 through 2011. These 104 energy projects cost about \$437 million with estimated savings of about \$718 million. Specifically, our analyses found Marine Corps and Naval Facilities Engineering Command personnel did not establish performance assurance measures to verify savings and retain auditable documentation for energy projects. Additionally Naval Facilities Engineering Command personnel did not effectively manage the validation and reporting processes. To address these internal control

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<sup>3</sup> Selected from a total universe of 350 DON energy projects, and totaling approximately \$1.6 billion.

weaknesses, the Assistant Secretary of the Navy (Energy, Installations, and Environment) needs to establish policy and provide oversight over performance assurance, validation processes, reporting processes, and project documentation.

### **ENERGY CONSERVATION INVESTMENT PROGRAM**

We audited Fiscal Years 2006 – 2011 DON Energy Conservation Investment Program projects. Our audit identified 110 planned, ongoing, and completed program projects valued at approximately \$150 million.<sup>4</sup> We judgmentally selected the Naval Facilities Engineering Command Southwest region based on the highest concentration of Energy Conservation Investment Program projects, which was 45 of the 110 projects, valued at \$52 million (with an estimated savings of about \$96 million). We randomly selected 30 of 45 projects costing \$33 million (with an estimated savings of about \$63 million) (see Exhibit D, Activities Visited and/or Contacted).

We interviewed key personnel to determine whether Energy Conservation Investment Program projects provided an acceptable return on investment. Also, we obtained copies of supporting documentation, reviewed projected estimated savings, and analyzed support for projects expected to achieve intended savings to investment ratio/return on investment (see Exhibit C, Scope and Methodology). Naval Facilities Engineering Command has been working diligently to improve their controls over the program; however, we identified the weaknesses discussed below.

#### **Performance Assurance**

DON personnel did not establish performance assurance measures to ensure all 30 Energy Conservation Investment Program projects achieved and sustained their intended savings. An Office of the Secretary of Defense memorandum, dated March 1993 and titled “ECIP [Energy Conservation Investment Program] Guidance,” requires DON to maintain current, realized savings for each approved project. Both Executive Order 13514 and the Energy Independence and Security Act of 2007 state that agencies shall drive continuous improvement by annually evaluating performance, and shall ensure that equipment performance is measured during its entire life and verify savings. The Naval Facilities Engineering Service Center Program Manager stated that without meters on every project or building and/or a system to track performance, they have no way to verify that projects were achieving their intended savings. For example, the Project Manager for Marine Corps Base Camp Pendleton stated that they do not have a system in place to track the actual performance of completed projects and rely on the tenants to notify them of problems. Problems would be easily identified during a performance review of projects.

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<sup>4</sup> The universe and program costs were provided by Marine Corps and Naval Facilities Engineering Command Program Managers.

Naval Facilities Engineering Command personnel responsible for Energy Conservation Investment Program project management did not ensure projects achieved and sustained their intended savings because they were unaware of the requirement to evaluate performance for the projects. Additionally, DON management did not establish controls and provide oversight to track the performance of ongoing/completed projects. As a result, DON could not determine if projects were meeting their intended cost and/or energy savings.

On 27 April 2010, the Office of the Secretary of Defense issued guidance via e-mail requiring measurement and verification reports for all future Energy Conservation Investment Program projects. Naval Facilities Engineering Command Southwest communicated directly with their Integrated Project Team to take immediate action to develop performance metrics for their projects.

### **Reporting Process**

DON has continuously worked to improve their reporting process for Energy Conservation Investment Program projects. However, we found they did not have sufficient oversight and controls in place to provide reasonable assurances that estimated savings reported up the chain of command were the most current. This occurred because DON did not have a system in place to ensure updates to the Life Cycle Cost Analysis cost savings were properly documented and reported. During our review of the Energy Conservation Investment Program reporting process, we found 2 of the 30 projects' estimated costs reported to the Office of the Secretary of Defense were not the most current project cost estimates. Also, we found multiple copies of the analyses for 10 of the 30 projects that reflected different estimated savings compared to savings reported to the Office of the Secretary of Defense, and another project that was overstated by about \$200,000. The remaining 17 projects' estimated costs matched what was reported to the Office of the Secretary of Defense. According to Naval Facilities Engineering Service Center's Program Manager, the analyses were frequently updated, but in some cases the preparers were not dating, signing, documenting, and reporting the reason for the changes to the Service Center. He further stated the Energy Project Status System, which was currently offline, compiled data on each project's estimated costs and savings. He said that this system is scheduled to come back online soon, but he did not give a date. With the Energy Project Status System, they will be able to track project costs savings from cradle to grave. However, he admitted that the Energy Project Status System coming back online will not solve the problem with managers routinely updating and reporting the changes to the analyses properly.

### **Project Documentation**

DON personnel were unable to provide sufficient auditable documentation to support the \$63 million estimated cost savings for 30 Energy Conservation Investment Program projects submitted to the Office of the Secretary of Defense for funding. This occurred

because DON personnel did not maintain copies of their original documentation supporting estimated savings or report their method for validating savings, and installation Energy Managers were not aware of existing guidance requiring them to maintain copies of their original documentation. DON management was only able to provide copies of their Life Cycle Cost Analyses and DD Forms 1391.<sup>5</sup> The 1993 Office of the Secretary of Defense memorandum requires DON to maintain current, auditable documentation on the execution status and the projected and realized savings for each approved project. DON did not maintain sufficient auditable documentation to support the method used to develop their cost estimates for both the analyses and DD Forms 1391 for all 30 projects reviewed. The analyses provided by DON personnel were not supported by the real discount rate taken from the National Institute of Standards and Technology Handbook 135; actual current costs of energy; economic life of the retrofit or the remaining life of the basic facility being retrofitted, whichever is less; project costs, project savings and baselines. The DD Forms 1391 were not supported by Brief Sheets, Detailed Cost Estimates, Basic Facility Requirements, Facility Planning Document, and Engineering Evaluations. The Naval Facilities Engineering Service Center Commanding Officer stated during our opening conference that all Energy Conservation Investment Program DD Forms 1391 should have detailed cost estimates equivalent to regular military construction projects. In addition, we found the DD Forms 1391 provided as support did not identify the method used for savings verifications. According to the Office of the Secretary of Defense, DD Forms 1391 are required to document the method the activity plans to use to verify savings.

Naval Facilities Engineering Command Southwest personnel took immediate action by issuing an e-mail requiring all installations to attach copies of their supporting documents for Energy Conservation Investment Program projects in the Electronic Project Generator starting in Fiscal Year 2011. Specifically, they stated copies of the DD Forms 1391, Life Cycle Cost Analysis worksheets, cost estimate worksheets or Basis for Estimates, and any other supporting documentation should be included as an attachment in the Electronic Project Generator.

As a result of not maintaining auditable documentation, the Office of the Secretary of Defense, the Assistant Secretary of the Navy (Energy, Installations, and Environment), and Naval Facilities Engineering Command were making decisions to fund and/or award Energy Conservation Investment Program projects based on insufficient auditable documentation. Further, the project documentation issues identified above for planned projects could lead to complications in tracking the actual performance (i.e. energy savings) once the projects are executed.

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<sup>5</sup> DD Form 1391 is the primary form to document energy/facility projects.

## **ENERGY SAVINGS PERFORMANCE CONTRACTS**

There were 52 Energy Savings Performance Contract projects awarded between Fiscal Years 1997 and 2009, costing approximately \$767 million.<sup>6</sup> We reviewed all 10 projects located in the Naval Facilities Engineering Command Southwest region, costing approximately \$126 million (with guaranteed energy savings of about \$222 million<sup>7</sup>). We judgmentally selected Naval Facilities Engineering Command Southwest because the DON Energy Savings Performance Contract team<sup>8</sup> is located in this region. We conducted site visits at various locations in the Southwest region (see Exhibit D, Activities Visited and/or Contacted).

We reviewed Energy Savings Performance Contract project documentation and interviewed installation, Specialty Center Acquisitions, Naval Facilities Engineering Command, and Naval Facilities Engineering Service Center personnel to verify that the projects' energy reductions were sufficient to pay all contract costs. During our installation site visits, we judgmentally selected Energy Savings Performance Contract energy conservation measures to verify existence and operation (see Exhibit C, Scope and Methodology).

### **Validation Process**

We found Naval Facilities Engineering Command personnel did not effectively manage the Energy Savings Performance Contracts' validation process, which included measurement and verification reviews, and subsequent payments. Energy service companies generate measurement and verification reports, which document reported savings. According to Specialty Center Acquisitions, Naval Facilities Engineering Command personnel, the measurement and verification reports were the only documentation that directly addressed verified savings. The validation process is essential to ensure the reported savings and subsequent payments are accurate.

#### *Measurement and Verification Report Reviews*

Naval Facilities Engineering Command personnel did not effectively manage the Energy Savings Performance Contracts' validation process because Naval Facilities Engineering Command did not establish detailed procedures for reviewing the verified savings in the measurement and verification reports, documenting the reviews, and retaining the review documentation. For the 10 projects reviewed, installation personnel were unable to provide documentation to support their review of the verified savings in the measurement

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<sup>6</sup> This reflects the capital costs reported in the Energy Project Status System for Fiscal Years 1997-2007 and Naval Facilities Engineering Service Center spreadsheets for Fiscal Years 2008-2009.

<sup>7</sup> This amount is from Delivery Order Schedules "Delivery Order-1" or "Schedule H-1."

<sup>8</sup> The DON Energy Savings Performance Contract team consists of personnel from Specialty Center Acquisitions, Naval Facilities Engineering Command personnel who administer Energy Savings Performance Contracts, and Naval Facilities Engineering Service Center personnel who provide technical and financial expertise.

and verification report. According to Naval Facilities Engineering Command personnel, oversight practices were not sufficiently formalized to ensure measurement and verification reports generated by the energy service companies were reviewed by DON personnel. Although DON did not have a requirement for Navy technical representatives<sup>9</sup> to certify the validation of measurement and verification reports in writing, the Department of Energy Federal Energy Management Program published guidance titled, “Reviewing Post-Installation and Annual Reports for Federal [Energy Savings Performance Contract] Projects” in October 2007. This provided a framework for implementing uniform and consistent reviews of annual (measurement and verification) reports for Federal Energy Savings Performance Contract projects. Further, the Naval Facilities Engineering Command Energy Savings Performance Contract Process Flowchart did not include a step for the validation of measurement and verification reports (see Exhibit E, Energy Savings Performance Contract Process).

Naval Facilities Engineering Command personnel stated that they were aware of the Federal Energy Management Program guidance; however, installations were not required to implement the guidance and each installation was allowed to conduct their own review of the annual measurement and verification reports. Although Naval Facilities Engineering Command established Memorandums of Agreement between the DON Energy Savings Performance Contract team and each of the regions or installations implementing projects, stating that the region or installation is required to verify savings, the agreement did not specify how the installation would verify the measurement and verification reports. According to Naval Facilities Engineering Service Center personnel, the Memorandums of Agreement require the installations to review the measurement and verification reports, verify the savings amounts, and ensure the energy conservation measures were functioning properly.

Naval Facilities Engineering Service Center personnel stated that the Prompt Payment Certification form<sup>10</sup> served as the documentation for payment and was used to certify that measurement and verification reports were reviewed and validated. However, according to the Centralized Expenditure and Reimbursement Processing System reports we reviewed, the payments to the energy service companies predated the measurement and verification reports for all 10 Energy Savings Performance Contract projects. Therefore, the payment form cannot serve as the documentation supporting that measurement and verification reports have been reviewed and validated.

When asked if Naval Facilities Engineering Command had an alternative measurement and verification review guide to provide a consistent review process for installations to follow, Naval Facilities Engineering Command personnel were unable to provide any

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<sup>9</sup> The Navy Marine Corps Energy Project Execution Guide states that the installation Navy technical representative is responsible for receiving and reviewing measurement and verification reports.

<sup>10</sup> According to Specialty Center Acquisition, Naval Facilities Engineering Command personnel, the Prompt Payment Certification form is an “umbrella” document that attests that all energy conservation measurement systems were operational.

documentation. As a best business practice, Naval Facilities Engineering Command should establish a consistent review process, by energy conservation measures, for all installations to follow when reviewing the measurement and verification reports and validating the projects' savings. This should include retaining documentation of their annual measurement and verification reviews. Also, the installations should include supporting documentation when submitting their Prompt Payment Certification forms after validating<sup>11</sup> the measurement and verification reports, because the Specialty Center Acquisitions, Naval Facilities Engineering Command only receives the payment forms and relies on the payment forms to make payments.

### *Subsequent Payment*

We found that for all 10 Energy Savings Performance Contract projects, Naval Facilities Engineering Command personnel paid the energy service companies prior to receiving and verifying the measurement and verification reports, contrary to DoD guidance. According to DoD Instruction 4170.11, "payments may be made only when actual savings generated from the financed project exceed the payment amount in the same year."

According to Naval Facilities Engineering Command personnel, the energy service companies were paid at the beginning of the yearly performance period to save on interest costs. However, Naval Facilities Engineering Command personnel were unable to provide documentation to support the amount saved on interest costs for the 10 Energy Savings Performance Contract projects reviewed. Additionally, we found contract language for 9 of the 10 projects permitted the energy service companies to receive payments prior to submitting annual measurement and verification reports. Also, the Naval Facilities Engineering Command Energy Savings Performance Contract process allows the annual payment to be made prior to the measurement and verification step (see Exhibit E, Energy Savings Performance Contract Process). Although the contract language and the Naval Facilities Engineering Command Energy Savings Performance Contract process permit the practice of paying prior to verifying measurement and verification reports, DON activities are required to adhere to DoD guidance.

As a result of Naval Facilities Engineering Command not establishing detailed procedures for the validation process, including measurement and verification reviews and subsequent payments, DON does not have reasonable assurance that Energy Savings Performance Contract projects achieved sufficient savings from energy reductions to pay all contract costs and provided an acceptable return on investment. Additionally, for the

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<sup>11</sup> Prompt Payment Certification forms are generated prior to measurement and verification reports, and are intended to certify that the "work or service has been received, inspected, and accepted as conforming to the contract and payment is in accordance with contract provisions. All source documentation provided in support of payment is accurate."

reported savings totaling approximately \$74 million,<sup>12</sup> DON may have paid the energy service companies when the reported savings may not have been achieved.

### **UTILITY ENERGY SERVICES CONTRACTS**

There were 188 Utility Energy Services Contract projects awarded between Fiscal Years 1997 and 2009, costing approximately \$636 million.<sup>13</sup> We analyzed a statistical sample of 64 projects, costing about \$278 million<sup>14</sup> and estimated to save about \$433 million,<sup>15</sup> to verify the sufficiency of DON Utility Energy Services Contract projects' energy reduction savings to pay all contract costs. The 64 randomly selected projects were administered by 6 different Facilities Engineering Commands; 20 by Naval Facilities Engineering Command Southeast, 18 by Naval Facilities Engineering Command Southwest, 9 by Naval Facilities Engineering Command Northwest, 9 by Naval Facilities Engineering Command Mid-Atlantic, 5 by Naval Facilities Engineering Command Midwest, and 3 by Naval Facilities Engineering Command Washington.

During site visits to these six Facilities Engineering Commands, Naval Facilities Engineering Command Utilities and Energy Management personnel, as well as acquisition personnel, provided us access to available project documentation and facilitated brief tours of a few projects' energy conservation measures. For each sampled project, we requested the amount of reported verified energy savings and related supporting documentation, such as measurement and verification reports or alternate performance assurance documentation (see Exhibit C, Scope and Methodology). We interviewed project personnel and analyzed available project documentation.

#### **Performance Assurance**

We found that Naval Facilities Engineering Command personnel responsible for Utility Energy Services Contract project management did not effectively determine and track reduction in energy consumption or verified savings for 56 of the 64 sampled projects. For 6 of the remaining 8 sampled projects, results of contractually required measurement and verification were not yet due at the time of our site visit analyses. Only two of the projects had documentation tracking reduction in energy consumption and/or resultant energy savings; therefore, we did not project results to the universe of 188 projects.

The Energy Independence and Security Act of 2007 requires energy managers to ensure equipment and system performance is measured during the entire life of energy

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<sup>12</sup> The \$74 million comes from the verified savings reported in the annual measurement and verification reports for the 10 projects.

<sup>13</sup> This reflects the capital costs reported in the Energy Project Status System for Fiscal Years 1997-2007 and Naval Facilities Engineering Service Center spreadsheets for Fiscal Years 2008-2009 while the Energy Project Status System was offline.

<sup>14</sup> Cost of 64 projects was calculated based on available project documentation.

<sup>15</sup> Estimated savings of 64 projects were calculated from Life Cycle Cost Analyses obtained; 14 projects did not have available Life Cycle Cost Analysis data to estimate savings.

conservation measures to ensure proper operations, maintenance, and repair; and to ensure energy and water savings are measured and verified. Further, according to DoD Instruction 4170.11, Naval Facilities Engineering Command personnel should have tracked all estimated and actual costs, estimated and verified savings, interest rates, measurement and verification information, mark-ups, and any changes to project scope that may have affected costs and savings.

Personnel responsible for Utility Energy Services Contract project management did not effectively determine and track reduction in energy consumption or verified savings for most of the sampled projects because Naval Facilities Engineering Command did not provide sufficient oversight over awarded Utility Energy Services Contract projects. Specifically, there was no guidance on how to conduct performance assurance, how to report project results, or ensure retention of complete project documentation as follows:

- *Performance Assurance Guidance:* Although we identified DON guidance that included single sentence requirements for performing measurement and verification reports on Utility Energy Services Contracts, such as the “Navy and Marine Corps Energy Project Execution Guide,” “DON Energy Program Business Plan,” and the “Naval Facilities Engineering Command Business Management System,” we determined that Naval Facilities Engineering Command did not provide detailed guidance to Facilities Engineering Commands regarding how to conduct performance assurance for Utility Energy Services Contracts.
- *Reporting Process:* Although we identified Naval Facilities Engineering Service Center’s compilation of estimated costs and savings for each Utility Energy Services Contract in the Energy Project Status System, and we identified reporting of estimated savings and planned projects to Naval Facilities Engineering Command Atlantic, we determined there was no reporting of verified savings for projects.
- *Project Documentation:* In lieu of reported verified savings, we attempted to determine whether available project documentation could enable Facilities Engineering Command Utilities and Energy Management personnel to calculate verified savings. Although the Federal Acquisition Regulation requires retention of contract files for 6 years and 3 months from final payment, Naval Facilities Engineering Command personnel did not ensure complete Utility Energy Services Contract project documentation was maintained. At each Facilities Engineering Command, personnel had difficulty locating examples of key project documentation for sampled projects, such as detailed supporting matrices for estimated energy savings and evidence of project implementation.
  - In some cases, the Facilities Engineering Command Utilities and Energy Management obtained missing documents from external sources, such as obtaining a copy of the project closeout document from the utility company or

a copy of the Life Cycle Cost Analysis from Naval Facilities Engineering Service Center.

- For 7 of the 64 sampled projects, Facilities Engineering Command personnel were not able to identify contract numbers for contract awards, contract jackets were lost, or the delivery orders were missing.

During site visit exit briefings, Facilities Engineering Command personnel acknowledged the need for improved oversight of Utility Energy Services Contract project performance assurance and document retention.

Since Naval Facilities Engineering Command personnel did not effectively track reduction in energy consumption and resultant energy savings for 56 of 64 sampled Utility Energy Services Contract projects, DON did not have reasonable assurance that these projects generated or would generate the estimated \$388 million<sup>16</sup> of savings from energy reductions or enough savings to pay for about \$251 million in project costs, calculated from available project documentation. However, DoD Instruction 4170.11 requires “any funds paid pursuant to a Utility Energy Services Contract shall be from funds made available through the same project’s recurring or nonrecurring energy or water related cost savings.”

## **CONCLUSION**

We identified opportunities to improve the management of DON energy projects that used the Energy Conservation Investment Program, Energy Savings Performance Contracts, and Utility Energy Services Contracts. Specifically, DON personnel did not establish performance assurance measures to verify savings or retain auditable documentation for the Energy Conservation Investment Program projects; Naval Facilities Engineering Command personnel did not effectively manage the validation process, which included Energy Savings Performance Contract measurement and verification report reviews and subsequent payments; and Naval Facilities Engineering Command personnel did not effectively determine and track the results of the Utility Energy Services Contract projects.

These conditions, which we concluded were internal control weaknesses, resulted because DON management did not provide sufficient controls and oversight over performance assurance, validation and reporting processes, and project documentation. An overarching policy needs to be established that addresses performance assurance, validation and reporting processes, and documentation because of the relationship between the energy programs’ funding and financing tools. Once the policy is established, Secretary of the Navy Instruction 4100.9A and applicable Naval Facilities Engineering Command and Headquarters Marine Corps guidance should be updated.

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<sup>16</sup> Estimated savings of 56 projects was calculated from Life Cycle Cost Analyses obtained; 14 projects did not have available Life Cycle Cost Analysis data to estimate savings.

Overall, DON does not have reasonable assurance that the Energy Conservation Investment Program projects provided an acceptable return on investment, and that Energy Savings Performance Contract, and Utility Energy Services Contract projects achieved sufficient savings from energy reductions to pay all contract costs.

## Recommendations and Corrective Actions

Our recommendations, summarized management responses, and our comments on the responses are presented below. The complete text of management responses are in the Appendices.

We recommend that the Assistant Secretary of the Navy (Energy, Installations, and Environment):

**Recommendation 1.** Update Secretary of the Navy Instruction 4100.9a, “Department of the Navy Shore Energy Management,” to establish policy regarding performance assurance, validating and reporting processes, and project documentation to ensure energy project costs and savings are verifiable.

**Management response to Recommendation 1.** Concur. The Deputy Assistant Secretary of the Navy (Energy) will convene the Shore Energy Policy Board, whose membership includes the Chief of Naval Operations, Ashore Readiness Division (N46) and the Commandant of the Marine Corps, Installations and Logistics Facilities Branch (LFF), to develop the new project assurance and validation policy and to implement the changes to Secretary of the Navy Instruction 4100.9A. Target completion date for submitting the revised instruction for the Navy documentation review is 31 March 2011.

**Naval Audit Service comments on response to Recommendation 1.**

Planned actions by management meet the intent of the recommendation. This recommendation is open pending completion of agreed-upon actions.

**Recommendation 2.** Coordinate with Chief of Naval Operations and Commandant of the Marine Corps to implement the policy developed as a result of Recommendation 1.

**Management response to Recommendation 2.** Concur. The Deputy Assistant Secretary of the Navy (Energy) will coordinate the policy implementation with the Chief of Naval Operations Ashore Readiness Division (N46) and the Commandant of the Marine Corps, Installations and Logistics Facilities Branch (LFF) as part of the Shore Energy Policy Board development of the instruction changes. Target completion date for submitting the revised instruction for the Navy documentation review is 31 March 2011.

**Naval Audit Service comments on response to Recommendation 2.**

Planned actions by management meet the intent of the recommendation. This recommendation is open pending completion of agreed-upon actions.

We recommend that the Commandant of the Marine Corps:

**Recommendation 3.** Establish processes and controls and provide oversight for conducting performance assurance on Energy Conservation Investment Program projects' achievement of energy reductions to include comparing verified savings with project costs.

**Management response to Recommendation 3.** Concur. Marine Corps Order P1100.9C currently requires Installation Commanders to maintain auditable documentation on the execution status and the projected and realized savings for Energy Conservation Investment Program projects for the first 5 years of operation. By 30 March 2011, Headquarters, Marine Corps, Installations and Logistics Facilities Branch (LFF) will issue an interim instruction pertaining to Energy Conservation Investment Program projects requiring Installation Commanders to: (1) identify an appropriate measurement and verification process per the Department of Energy, Federal Energy Management Program Measurement and Verification Guidelines: "Measurement and Verification for Federal Energy Projects," (2) maintain auditable documentation on realized savings over the operating life of the equipment, and (3) report project performance to Headquarters, Marine Corps, Installations and Logistics Facilities Branch (LFF) annually.

During February and March 2011, at our Annual Facilities Energy Summits, Headquarters Marine Corps, Installations and Logistics Facilities Branch (LFF) will provide training on the requirement to establish a measurement and verification process for Energy Conservation Investment Program projects to energy management personnel from the Marine Corps Installations Commands and their respective installations. The objectives for these summits are to create a sustained leadership focus to provide program oversight and accountability, provide a forum to share information on energy program management, energy saving technologies, and measures for new buildings and building retrofits, and develop program direction to integrate energy efficiency and water conservation requirements into daily operations and long term programs.

Marine Corps Order P1100.9C will be revised to reflect the interim instruction pertaining to the management of Energy Conservation Investment Program projects by 30 March 2012.

**Naval Audit Service comments on response to Recommendation 3.**

Planned actions by management meet the intent of the recommendation. This

recommendation is open pending completion of agreed-upon actions. Because the target completion date is more than a year from the date of publication, we are establishing an interim target completion date of 31 August 2011.

**Recommendation 4.** Establish controls and provide oversight to ensure auditable Energy Conservation Investment Program documentation is retained (to include original and updated documentation for DD Forms 1391 and/or Life Cycle Cost Analyses to support Savings to Investment Ratio/Return on Investment).

**Management response to Recommendation 4.** Concur. Marine Corps Order P1100.9C currently requires Installation Commanders to submit project documentation including a Life Cycle Cost Analysis to Headquarters, Marine Corps, Installations and Logistics Facilities Branch (LFF) for each Energy Conservation Investment Program project. By 30 March 2011, Headquarters, Marine Corps, Installations and Logistics Facilities Branch (LFF) will issue an interim instruction pertaining to Energy Conservation Investment Program projects, which will: (1) detail the format and content required for DD Forms 1391, (2) establish the requirement for a Cost Estimate (Naval Facilities Engineering Command Form 11013/7 or a similar form), (3) provide guidance for developing a Life Cycle Cost Analysis per 10 Code of Federal Registers 436, Subpart A, "Methodology and Procedures for Life Cycle Cost Analysis," and (4) direct Marine Corps Headquarters, Marine Corps Regional Installations Commands and Installation Commanders to retain project documentation over the operating life of the equipment.

During February and March 2011, Headquarters, Marine Corps, Installations and Logistics Facilities Branch (LFF) will provide training to energy management personnel from Marine Corps Installations Commands and their respective installations at our Annual Facilities Energy Summits concerning the requirement to develop and retain project documentation. This brief will provide a clear description of the level of detail necessary to provide a thorough understanding of the existing situation and how the proposed project will make improvements. This will ensure that reviewing organizations clearly understand the project scope and expected results.

Marine Corps Order P1100.9C will be revised to reflect the interim instruction pertaining to the management of Energy Conservation Investment Program projects by 30 March 2012.

**Naval Audit Service comments on response to Recommendation 4.**

Planned actions by management meet the intent of the recommendation. This recommendation is open pending completion of agreed-upon actions. Because the target completion date is more than a year from the date of publication, we are establishing an interim target completion date of 31 August 2011.

We recommend that Commander, Naval Facilities Engineering Command:

**Recommendation 5.** Establish processes and controls and provide oversight for conducting performance assurance on Department of the Navy Energy Conservation Investment Program and Utility Energy Services Contract energy projects' achievement of energy reductions to include comparing verified savings with project costs.

**Management response to Recommendation 5.** Concur. Naval Facilities Engineering Command has developed a plan of action and milestones to address this Recommendation. Key milestones within our overall plan to correct this deficiency include: (1) By 28 February 2011, publish immediate interim guidance to field teams so that they are aware of the performance verification requirement and have the basic information to begin immediately capturing baseline data and incorporating technical requirements for performance verification on current year (Fiscal Year 2011) projects; (2) By 30 September 2011, update existing Business Management System processes that relate to energy projects to include savings measurement and verification roles, responsibilities, and requirements, including oversight; (3) By 30 June 2011, develop and deploy field training on best practices for tracking and documenting energy project savings; (4) By 30 September 2011, develop a comprehensive new Business Management System process dedicated to energy savings as it applies to the different types of energy projects; and (5) By 30 July 2011, develop a conference session dedicated to sharing experiences and lessons learned in energy savings documentation to be conducted at the annual GovEnergy Symposium in August. Additional oversight will be provided through the Inspector General Inspection process, which annually verifies adherence to the standard processes as part of the self-assessment in preparation for Manager's Internal Control Program Statement of Assurance and as part of the triennial on-site inspection, where each business line is evaluated.

**Naval Audit Service comments on response to Recommendation 5.**

Planned actions by management meet the intent of the recommendation. This recommendation is open pending completion of agreed-upon actions.

**Recommendation 6.** Establish processes and controls and provide oversight for reporting achievement of annual verified energy reductions for each Energy Conservation Investment Program and Utility Energy Services Contract energy project.

**Management response to Recommendation 6.** Concur. The Department of Energy created a database that all Federal agencies are required to use for capturing and reporting performance verification of energy projects. Naval Facilities Engineering Command will develop internal processes and controls and provide oversight of the reporting to the Department of Energy database. The

Department of Energy was scheduled to distribute guidance for input to the database by 31 January 2011. After receiving the guidance, Naval Facilities Engineering Command will set up users within 30 days and provide Navy users with instructions within 60 days. Measurement and verification data on projects will be produced by 31 December 2011 for projects with prior fiscal year measurement and verification plans. Energy managers will have 30 days to review and comment on the data. Regional Energy Managers will provide oversight of inputs by installation level Energy Managers. At a minimum, inputs will be reviewed annually as part of the Annual Energy Management Report submission. In accordance with Department of Energy guidance, Energy Managers will report measurement and verification results by 31 May 2012 for those projects and note any discrepancies that require resolution. Beginning in Fiscal Year 2012, all energy projects will have measurement and verification plans and performance of these projects will be reported by 31 May of the following fiscal year and annually thereafter.

**Naval Audit Service comments on response to Recommendation 6.**

Planned actions by management meet the intent of the recommendation. This recommendation is open pending completion of agreed-upon actions. In subsequent communication, Naval Facilities Engineering Command clarified the estimated target completion date to provide Navy users with instructions to use the Department of Energy database as 90 days from 31 January 2011. Therefore, the estimated target completion date is 2 May 2011.

**Recommendation 7.** Establish processes and controls and provide oversight for ensuring auditable Energy Conservation Investment Program and Utility Energy Services Contract energy project documentation is retained to include support for original and updated, estimated and verified savings and costs.

**Management response to Recommendation 7.** Concur. By 30 June 2011, Naval Facilities Engineering Command will develop and deploy field training on best practices for tracking and documenting energy project savings.

By 30 September 2011, Naval Facilities Engineering Command will update existing Business Management System processes that relate to energy projects to include measurement and verification roles, responsibilities, requirements, and oversight, and add procedures requiring the technical lead and contracting officer to collaborate in determining the required documentation relevant to maintaining the accuracy and completeness of contract files from requirement generation through final payment. At a minimum, documentation shall include original and updated, estimated and verified savings and costs. Acquisition will retain all contract files for a minimum of 6 years and 3 months after final payment.

By 30 September 2011, Naval Facilities Engineering Command will develop a list of required energy project documentation, including required length of retention and requirement to update documents during life of project as well as add additional oversight of Utility Energy Service Contracts to the Procurement Performance Management and Assistance Program to ensure that acquisition personnel are conducting reviews of Utility Energy Service Contracts and retaining required documentation in the contract files for the required amount of time. At a minimum, documentation shall include original and updated, estimated and verified savings and costs.

Oversight will be provided through the Inspector General Inspection process, which annually verifies adherence to the standard processes as part of the self-assessment in preparation for Manager's Internal Control Program Statement of Assurance and as part of the triennial on-site inspection, where each business line is evaluated.

**Naval Audit Service comments on response to Recommendation 7.**

Planned actions by management meet the intent of the recommendation. This recommendation is open pending completion of agreed-upon actions.

**Recommendation 8.** Establish detailed procedures to verify the accuracy of the measurement and verification reports for Energy Savings Performance Contract projects. At a minimum, Naval Facilities Engineering Command personnel should document and retain documentation supporting that they have reviewed the measurement and verification reports for accuracy.

**Management response to Recommendation 8.** Concur. Naval Facilities Engineering Command is completing work on a Lean Six Sigma effort to streamline the Energy Savings Performance Contract process. As part of that Lean Six Sigma, detailed measurement and verification validation procedures will be incorporated. Measurement and verification procedures are included in Step 8 of the 9-step Energy Savings Performance Contract process. The revised procedures will be finalized by 31 March 2011. The new process will be standardized within the Naval Facilities Engineering Command by incorporating it into the existing Business Management System for Energy Savings Performance Contract projects. The process will include tracking, documenting, and retaining of all measurement and verification report validations.

**Naval Audit Service comments on response to Recommendation 8.**

Planned actions by management meet the intent of the recommendation. This recommendation is open pending completion of agreed-upon actions.

**Recommendation 9.** Provide oversight to ensure that Naval Facilities Engineering Command personnel adhere to the procedures in Recommendation 8.

**Management response to Recommendation 9.** Concur. When the Lean Six Sigma effort is complete and the Business Management System is revised by 31 March 2011, it will be the standard Naval Facilities Engineering Command process. Adherence to standard processes is verified through the Procurement Performance Management and Assistance Program and the Naval Facilities Engineering Command Inspector General Inspection process. The Procurement Performance Management and Assistance Program rotates through all acquisition components in the Naval Facilities Engineering Command, verifying compliance with procedures required by policy or regulation as identified in the Business Management System. Each acquisition component reports annually through its internal business assessment and receives individual compliance attention if needed. In addition, the Inspector General Inspection process verifies adherence to the standard processes annually as part of the self-assessment in preparation for Manager's Internal Control Program Statement of Assurance and as part of the triennial on-site inspection, where each business line is evaluated.

**Naval Audit Service comments on response to Recommendation 9.**

Planned actions by management meet the intent of the recommendation. This recommendation is open pending completion of agreed-upon actions.

**Recommendation 10.** Comply with Department of Defense Instruction 4170.11 and provide oversight to Naval Facilities Engineering Command personnel to ensure payments for Energy Savings Performance Contract projects are based on the receipt, verification of accuracy, and acceptance of the annual measurement and verification reports.

**Management response to Recommendation 10.** Concur. For Energy Savings Performance Contract projects, Department of Defense Instruction 4170.11 requires that "Payments may be made only when the project is determined to be life cycle cost effective and when actual savings generated from the financed project exceed the payment amount in the same year." By revising and adhering to the Business Management Systems identified in other recommendation responses, Naval Facilities Engineering Command will ensure measurement and verification reports are received, validated, and retained to comply with the Department of Defense Instruction. Business Management Systems will be in place by 31 March 2011. Initial measurement and verification validation will be performed within 18 months of project acceptance and annually thereafter for the life of the contract. Additionally, by 31 March 2011, Naval Facilities Engineering Command will request clarification from the Deputy Assistant Secretary of the Navy for Energy with respect to making payments prior to measurement and

verification validation and will incorporate the response into Business Management Systems.

**Naval Audit Service comments on response to Recommendation 10.**

Planned actions by management meet the intent of the recommendation. This recommendation is open pending completion of agreed-upon actions.

**Recommendation 11.** Establish processes and controls and provide oversight to ensure that the Naval Facilities Engineering Command personnel conduct reviews of Utility Energy Services Contract files for completeness throughout the payment schedule of the project, retaining the complete file until 6 years and 3 months from final payment in accordance with the Federal Acquisition Regulation.

**Management response to Recommendation 11.** Concur. By

30 September 2011, Naval Facilities Engineering Command will add procedures to the Utility Energy Services Contract Business Management System process to require the technical lead and contracting officer to collaborate in determining the required documentation relevant to maintaining the accuracy and completeness of contract files from requirement generation through final payment. Acquisition will retain ALL contract files for a minimum of 6 years and 3 months after final payment. By 30 September 2011, Naval Facilities Engineering Command will also add additional oversight of Utility Energy Services Contracts to the Procurement Performance Management and Assistance Program to ensure that the Naval Facilities Engineering Command acquisition personnel are conducting reviews of Utility Energy Services Contracts and retaining required documentation in the contract files for the required amount of time.

**Naval Audit Service comments on response to Recommendation 11.**

Planned actions by management meet the intent of the recommendation. This recommendation is open pending completion of agreed-upon actions.

## Section B:

# Status of Recommendations

Recommendations							
Finding <sup>17</sup>	Rec. No.	Page No.	Subject	Status <sup>18</sup>	Action Command	Target or Actual Completion Date	Interim Target Completion Date <sup>19</sup>
1	1	14	Update Secretary of the Navy Instruction 4100.9a, "Department of the Navy Shore Energy Management," to establish policy regarding performance assurance, validating and reporting processes, and project documentation to ensure energy project costs and savings are verifiable.	O	Assistant Secretary of the Navy (Energy, Installations, and Environment)	3/31/2011	
1	2	14	Coordinate with Chief of Naval Operations and Commandant of the Marine Corps to implement the policy developed as a result of Recommendation 1.	O	Assistant Secretary of the Navy (Energy, Installations, and Environment)	3/31/2011	
1	3	15	Establish processes and controls and provide oversight for conducting performance assurance on Energy Conservation Investment Program projects' achievement of energy reductions to include comparing verified savings with project costs.	O	Commandant of the Marine Corps	3/30/2012	8/31/2011
1	4	16	Establish controls and provide oversight to ensure auditable Energy Conservation Investment Program documentation is retained (to include original and updated documentation for DD Forms 1391 and/or Life Cycle Cost Analyses to support Savings to Investment Ratio/Return on Investment).	O	Commandant of the Marine Corps	3/30/2012	8/31/2011
1	5	17	Establish processes and controls and provide oversight for conducting performance assurance on Department of the Navy Energy Conservation Investment Program and Utility Energy Services Contract energy projects' achievement of energy reductions to include comparing verified savings with project costs.	O	Commander, Naval Facilities Engineering Command	9/30/2011	

<sup>17</sup> / + = Indicates repeat finding.

<sup>18</sup> / O = Recommendation is open with agreed-to corrective actions; C = Recommendation is closed with all action completed; U = Recommendation is undecided with resolution efforts in progress.

<sup>19</sup> If applicable.

Recommendations							
Finding <sup>17</sup>	Rec. No.	Page No.	Subject	Status <sup>18</sup>	Action Command	Target or Actual Completion Date	Interim Target Completion Date <sup>19</sup>
1	6	17	Establish processes and controls and provide oversight for reporting achievement of annual verified energy reductions for each Energy Conservation Investment Program and Utility Energy Services Contract energy project.	O	Commander, Naval Facilities Engineering Command	5/2/2011	
1	7	18	Establish processes and controls and provide oversight for ensuring auditable Energy Conservation Investment Program and Utility Energy Services Contract energy project documentation is retained to include support for original and updated, estimated and verified savings and costs.	O	Commander, Naval Facilities Engineering Command	9/30/2011	
1	8	19	Establish detailed procedures to verify the accuracy of the measurement and verification reports for Energy Savings Performance Contract projects. At a minimum, Naval Facilities Engineering Command personnel should document and retain documentation supporting that they have reviewed the measurement and verification reports for accuracy.	O	Commander, Naval Facilities Engineering Command	3/31/2011	
1	9	20	Provide oversight to ensure that Naval Facilities Engineering Command personnel adhere to the procedures in Recommendation 8.	O	Commander, Naval Facilities Engineering Command	3/31/2011	
1	10	20	Comply with Department of Defense Instruction 4170.11 and provide oversight to Naval Facilities Engineering Command personnel to ensure payments for Energy Savings Performance Contract projects are based on the receipt, verification of accuracy, and acceptance of the annual measurement and verification reports.	O	Commander, Naval Facilities Engineering Command	3/31/2011	

Recommendations							
Finding <sup>17</sup>	Rec. No.	Page No.	Subject	Status <sup>18</sup>	Action Command	Target or Actual Completion Date	Interim Target Completion Date <sup>19</sup>
1	11	21	Establish processes and controls and provide oversight to ensure that the Naval Facilities Engineering Command personnel conduct reviews of Utility Energy Services Contract files for completeness throughout the payment schedule of the project, retaining the complete file until 6 years and 3 months from final payment in accordance with the Federal Acquisition Regulation.	O	Commander, Naval Facilities Engineering Command	9/30/2011	

## **Exhibit A:**

# **Background**

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We performed audits of the Energy Conservation Investment Program and financing tools, including Energy Savings Performance Contracts and Utility Energy Services Contracts, which the Department of the Navy (DON) utilizes to address energy mandates.

According to the March 2009 Naval Facilities Engineering Command Concept of Operations, the following energy management roles and responsibilities have been established:

- Headquarters Naval Facilities Engineering Command Public Works Business Line provides centralized energy program management and tracks execution metrics;
- Headquarters Naval Facilities Engineering Command Operations leads execution of energy projects;
- Naval Facilities Engineering Command Atlantic/Pacific Operations tracks execution of energy program requirements;
- Facilities Engineering Command Business Lines (Asset Management, Environmental and Public Works) maintains data measurements against goals;
- Facilities Engineering Command Operations leads project execution within the area of responsibility; supports Public Works Department/Resident Officer In Charge of Construction energy project management efforts; and
- Public Works Department/Resident Officer In Charge of Construction executes energy programs at the installation level.

## **ENERGY CONSERVATION INVESTMENT PROGRAM**

Energy Conservation Investment Program projects are funded using Congressionally appropriated military construction funding. The projects funded through the program improve the living and working environments of Defense personnel, enhance mission capabilities, and greatly decrease the negative environmental effects of the Defense energy systems. Naval Facilities Engineering Command's criteria requires that any single project must be a renewable energy project, have a savings to investment ratio greater than 1.0, reduce conventional energy usage or water consumption, and cost over \$300,000.

Energy Conservation Investment Program projects are evaluated and prioritized on the basis of the savings to investment ratio, but the cornerstone of the energy project is the Life Cycle Cost Analysis. All Commands are required to complete the analysis when determining the savings to investment ratio and simple payback costs. A DD Form 1391

is also required as supporting documentation for all of the projects requesting funding. The analysis must consider:

- Excluding the general inflation by specifying all costs and savings in present value (i.e., constant dollar) using a real discount rate taken from the National Institute of Standards and Technology Handbook 135; and
- Bundling multiple projects under one energy project to improve the savings to investment ratio and simple payback cost.

Prior to Fiscal Year 2009, Energy Conservation Investment Program projects were routinely bundled under one project number to meet the savings to investment ratio requirement of approximately 1.25. However, since Fiscal Year 2009, Energy Conservation Investment Program renewable energy projects can no longer be bundled to meet the savings to investment ratio requirement. In addition, bundling allows for energy conservation measures that do not meet a Command's payback criteria to be combined, which shortens the payback period and increases the savings to investment ratio.

The DD Form 1391 is the primary format to document energy/facility projects. These forms have attachments supporting the location, scope, complexity, cost, and urgency of the project. Examples include: a detailed cost estimate, an economic analysis, the Basic Facility Requirements, and an engineering evaluation. The Naval Facilities Engineering Service Center's Energy Program Manager maintains copies of Life Cycle Cost Analyses and DD Forms 1391 for all Energy Conservation Investment Program projects.

Both the Utilities and Energy Manager and Product Line Coordinator of the installation will survey their respective bases to identify Energy Conservation Investment Program projects to submit to the Installation Commander for approval. Each installation will prepare a Life Cycle Cost Analysis and DD Form 1391 for each project and forward them to the Facilities Engineering Command (which is Naval Facilities Engineering Command Southwest).

The Service Center Program Manager issues a data call to Facilities Engineering Command, and Facilities Engineering Command issues the data call to each of their installations every year requesting a list of all planned Energy Conservation Investment Program projects. The installation and Regional Engineer would approve these projects before the Utilities and Energy Manager and Product Line Coordinator forward them to the Naval Facilities Engineering Command Southwest Energy Program Manager for review of the project cost and estimated savings. Naval Facilities Engineering Command Southwest approves each project's costs and savings before forwarding the data call and copies of the Life Cycle Cost Analyses and DD Forms 1391 directly to The Service Center.

The Naval Facilities Engineering Service Center reviews each of the project submissions and ranks them in priority order. Then the Service Center forwards their list of selected projects to Naval Facilities Engineering Command Headquarters and Commander, Navy Installations Command Headquarters. Naval Facilities Engineering Command Headquarters and Commander, Naval Installations Command Headquarters review and approve the list of Energy Conservation Investment Program projects and return it to the Service Center. The Service Center forwards the approved list to the Assistant Secretary of the Navy (Energy, Installations, and Environment) (formerly known as Assistant Secretary of the Navy (Installations and Environment)). However, the Marine Corps reviews and approves their own projects, and forwards the approved list to the Assistant Secretary. Commander, Naval Installations Command is trying to take over the management of all projects. However, at the time of this audit, Commander, Naval Installations Command's request to manage the Energy Conservation Investment Program was still awaiting approval.

The Assistant Secretary of the Navy (Energy, Installations, and Environment) reviews, approves, and consolidates all Navy and Marine Corps Energy Conservation Investment Program projects before forwarding them to the Office of the Under Secretary of Defense for final review, approval, and funding.

The Office of the Undersecretary of Defense approves Energy Conservation Investment Program projects by the end of each September, and forwards them in a Congressional Notification letter each year to the Chairmen of the Committees on Armed Services and other Congressional defense committees letting them know how funding will be used. Congress receives the list of projects by Component (e.g., Army, Navy, Marine Corps, Air Force, Defense Commissary Agency, Defense Logistics Agency, Office of the Undersecretary of Defense, etc.), project number, location, state, year, project description, and programmed amount savings-to-investment ratio/return on investment. The project costs and savings submitted to the Assistant Secretary of the Navy (Energy, Installations, and Environment), the Office of the Undersecretary of Defense, and Congress are based on estimated savings.

The Office of the Undersecretary of Defense submitted a Congressional Notification for about 96 Navy and Marine Corps Energy Conservation Investment Program projects between Fiscal Years 2006 through 2010 with an estimated programmed cost of about \$120 million. On average, the Navy received about \$18.4 million or 21 percent of the annual programmed amount for the program. This equates to an average of 14 projects per year. However, the Marine Corps received about \$5.6 million or 6 percent of the annual programmed amount, which equates to an average of 5 projects per year.

## **ENERGY SAVINGS PERFORMANCE CONTRACTS**

Energy Savings Performance Contracts are one type of financing tool that allows Federal agencies to accomplish energy savings projects without up-front capital costs and special Congressional appropriations. The Energy Policy Act of 1992 establishes Energy Savings Performance Contracts, and allows multiyear contracts for a period not to exceed 25 years. The Energy Policy Act defines Energy Savings Performance Contracts as “a contract which provides for the performance of services for the design, acquisition, installation, testing, operation, and, where appropriate, maintenance and repair, of an identified energy conservation measures or series of measures at one or more locations.” The Energy Policy Act of 1992 requires annual energy audits, performance guarantees, and guaranteed savings for Federal agencies. According to Title 10 Code of Federal Regulations, Section 436.37, annual energy audits are conducted by the Federal Government or contractor after implementation of energy conservation measures. The annual energy audit shall verify the achievement of annual energy cost savings performance guarantees provided by the contractor.<sup>20</sup>

Measurement and verification is an evaluation procedure for determining energy and cost savings. According to the “Navy and Marine Corps Energy Project Execution Guide,” measurement and verification is required for all financed projects. The goal of measurement and verification is to reduce the risk to Federal agencies by providing a mechanism to evaluate the performance of a project throughout the term of the contract. Techniques for measurement and verification include engineering calculations, metering, utility billing analysis, and computer simulation. Annual measurement and verification reports document the execution and results of the measurement and verification activities. The energy savings documented in the report serve as the basis for the energy service companies’ invoices after the regular interval report has been reviewed and approved by the Federal agency.

An Energy Savings Performance Contract is a partnership between a Federal agency and an energy service company. The energy service company conducts a comprehensive energy audit for the Federal facility and identifies improvements to save energy. The energy service company guarantees that the improvements will generate energy cost savings sufficient to pay for the project over the term of the contract. Savings must exceed payments in every year of the contract. After the contract ends, all additional cost savings accrue to the agency. The energy service company provides the energy surveys, engineering, design, construction management, labor, equipment, and sometimes maintenance to reduce energy, water use, and costs, as well as related costs such as operations and maintenance of energy systems. The Federal Energy Savings Performance Contract authority requires energy service companies to undertake

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<sup>20</sup> Throughout this report, annual energy audits are referred to as measurement and verification reports, and contractors are referred to as energy service companies.

measurement and verification activities and provide documentation to demonstrate that the guarantee has been met.

The Department of the Navy (DON) Energy Savings Performance Contract team is composed of personnel assigned from Naval Facilities Engineering Service Center and the Specialty Center Acquisition, Naval Facilities Engineering Command. The Service Center Web site states that “the ESPC [Energy Savings Performance Contract] Team operates to inform Energy Managers and Command personnel of the advantages of Energy Savings Performance Contract contracting, and forms linkages with client facility officials to consummate the contract award process and administer resulting contracts.” Specifically, the Service Center provides team leadership and technical and financial expertise. The Specialty Center Acquisition, Naval Facilities Engineering Command provides contracting authority and expertise and is responsible for administering Energy Savings Performance Contract contracts, issuing modifications and change orders, resolving disputes, and managing subsequent delivery orders. Also, the Specialty Center Acquisition, Naval Facilities Engineering Command is responsible for making payments to the energy service companies.

### **UTILITY ENERGY SERVICES CONTRACTS**

According to Instructions for Implementing Executive Order 13423, a Utility Energy Services Contract “is a contract between a Federal agency and a local utility providing energy, water, or sewage services, as well as provision of technical services and/or upfront project financing for energy efficiency, water conservation, and renewable energy investments, allowing Federal agencies to pay for the services over time, either on their utility bill, or through a separate agreement.” Further, DoD guidance states, “partnerships with the private sector through alternative financing (e.g. Utility Energy Services Contract) are a crucial tool for financing energy efficiency measures and allow installations to improve their infrastructure. These contracts shall include infrastructure upgrades (e.g. new cogeneration, renewable systems and ancillary structures) and new equipment (e.g. heating ventilation & air conditioning, lighting, motors, fixtures and controls) to help the installations reduce energy and water consumption.” Although, unlike for Energy Savings Performance Contracts, there are no statutory energy savings guarantees for Utility Energy Services Contracts, Federal Energy Management Program Performance Assurance Recommendations state that “prudent Federal energy program management requires that the continuing performance of the equipment secured and techniques applied under these contracts be assured to accomplish the expected energy and cost reductions.”

The DON Energy Business Plan explains that Naval Facilities Engineering Service Center maintains the Navy’s energy Web site and central databases of energy projects, energy consumption, and cost. It also explains that Facilities Engineering Commands coordinate and execute regional audits and projects, provide technical validation of cost and savings estimates for proposed energy projects, and validate savings annually.

Facilities Engineering Commands also serve as contracting agents with utility companies for alternatively financed projects, such as Utility Energy Services Contracts. According to Naval Facilities Engineering Service Center records, DON awarded 188 projects between Fiscal Years 1997 and 2009, at estimated implementation costs of \$636 million.

## Exhibit B:

# Pertinent Guidance

*Pertinent Guidance applicable to each funding/financing tool*

**Executive Order 13514**, 5 October 2009, states that the Federal agencies are required to increase energy efficiency and prioritize actions based on full accounting of both economic and social benefits. In addition, agencies shall drive continuous improvement by annually evaluating performance, extending or expanding projects that have net benefits and reassessing or discontinuing under-performing projects. Federal agencies' efforts and outcomes in implementing Executive Order 13514 shall be transparent, and shall disclose results associated with the actions taken on publicly available Federal Web sites.

**Executive Order 13423**, 24 January 2007, states that “the head of each agency shall improve energy efficiency and reduce greenhouse gas emissions of the agency, through reduction of energy intensity by 3 percent annually through the end of fiscal year (FY) 2015, or 30 percent by the end of FY [Fiscal Year] 2015, relative to the baseline of the agency's energy use in FY [Fiscal Year] 2003.”

**Title 10 Code of Federal Regulations 436.37**, Revised as of 1 January 2004, “Annual energy audits,” section states that “after contractor implementation of energy conservation measures (ECMs) and annually thereafter during the contract term, an annual energy audit shall be conducted by the Federal agency or the contractor as determined by the contract. The annual energy audit shall verify the achievement of annual energy cost savings performance guarantees provided by the contractor.” Also, “in the solicitation or in the contract, Federal agencies shall specify requirements for annual energy audits, the energy baseline, and baseline adjustment procedures.”

**The Energy Policy Act of 1992, Section 155: “Energy Savings Performance Contracts,”** 24 October 1992, states that “contracts under this title shall be energy savings performance contracts and shall require an annual energy audit and specify the terms and conditions of any Government payments and performance guarantees.” Also, “the contract shall provide for a guarantee of savings to the agency, and shall establish payment schedules reflecting such guarantee, taking into account any capital costs under the contract.” Further, “a Federal agency may enter into a multiyear contract under this title for a period not to exceed 25 years.” Additionally, “the terms ‘energy savings contract’ and ‘energy savings performance contract’ mean a contract which provides for the performance of services for the design, acquisition, installation, testing, operation, and, where appropriate, maintenance and repair, of an identified energy conservation measure or series of measures at one or more locations.”

**Energy Independence and Security Act of 2007**, 19 December 2007, states that “For each ECM [energy conservation measure] installed, energy managers shall ensure that equipment & system performance is measured during its entire life to ensure proper operations, maintenance, & repair; and energy & water savings are measured & verified.” The Act also amended Section 543(a)(1) of the National Energy Conservation Policy Act (42 U.S. Code 8253(a)(1)) by replacing the table specifying percentages of reduction in energy consumption per gross square foot of Federal buildings for a three percent annual reduction from Fiscal Years 2008 to 2015 as compared with the consumption in Fiscal Year 2003.

**Federal Acquisition Regulation**, issued March 2005, requires retention of contract files for 6 years and 3 months from final payment.

**Executive Office of the President Council on Environmental Quality Memorandum, “Substantially Increasing Federal Agency Use of Energy Savings Performance Contracting,”** 3 August 2007, states that “in the Federal government, one of our best opportunities to retrofit the energy systems needed to achieve Executive Order and legal requirements is through greater use of private government-wide ESCP [Energy Savings Performance Contract] and Utility Energy Services Contract (UESC) programs. Therefore, the heads of executive departments and agencies are directed to take appropriate actions to significantly increase their use of the ESPC [Energy Savings Performance Contract]/UESC [Utility Energy Services Contract] tool to accomplish their energy related goals.”

**Office of the Secretary of Defense for Logistics Memorandum, “Energy Conservation Investment Program Guidance,”** 17 March 1993, states that each Military Service and Defense Agency is responsible to maintain current, auditable documentation on the execution status and realized savings for each approved Energy Conservation Investment Program project.

**Department of Defense (DoD) Instruction 4170.11, “Installation Energy Management,”** 11 December 2009, states that:

- “Partnerships with the private sector through alternative financing (UESCs [Utility Energy Services Contracts] and ESPCs [Energy Savings Performance Contracts]) are a crucial tool for financing energy efficiency measures and allow installations to improve their infrastructure. Any funds paid by the DoD Component in the agreement pursuant to such a financed energy project shall be from funds made available through the same project’s recurring or nonrecurring energy or water-related cost savings. Payments may be made only when the project is determined to be life cycle cost effective and when actual savings generated from the financed project exceed the payment amount in the same year. Non-recurring savings are defined as ancillary savings such as utility rebates and avoided costs from repairs, replacements, retrofits, or capital improvements that have been

budgeted for, but are no longer required because of the financed energy project. Recurring savings are defined as reductions in energy, water, or wastewater consumption; maintenance; or operations costs because of the financed energy project. The basis for all cost savings used to pay for these projects must be fully documented in the contract file. Components shall track all estimated and actual costs, estimated and verified savings, interest rates, Measurement & Verification information, and mark-ups, as well as any changes to project scope that may affect costs and savings. Components shall make this information available on a central web-based application. Each Component entering into a financed project agreement shall ensure that a qualified project facilitator is designated and assigned, that aggregate annual costs do not exceed the savings, and that contracts are only awarded and administered by teams with appropriately documented experience and training.”

- Congress appropriates funding for the Energy Conservation Investment Program to execute projects that save energy or reduce energy costs. Realized savings should not only be auditable, but initial submission of proposed projects shall identify the method to be used for savings verifications on the DD Form 1391 of proposed projects.

**Secretary of the Navy Instruction 4100.9A, “Department of the Navy (DON) Shore Energy Management,”** 1 October 2001, states:

- “DON shall utilize government funds and financing tools to attain DON shore energy goals. Government fund sources include the Energy Conservation Investment Program and financing tools include ESPCs [Energy Savings Performance Contracts] and UESCs [Utility Energy Services Contracts].”
- Assistant Secretary of the Navy (Installations and Environment) is the Secretary of the Navy executive agent responsible for all DON shore energy matters worldwide. The Assistant Secretary will issue policy for the management of shore energy. In addition, the Commandant of the Marine Corps is responsible for all Marine Corps shore energy matters. The Commandant of the Marine Corps will plan, program, budget, and execute Marine Corps shore energy management programs in consonance with Assistant Secretary of the Navy (Installations and Environment) policy guidance. The Commandant of the Marine Corps will also ensure all installations within the Marine Corps are kept fully informed of plans and actions related to shore energy management.

**Department of Energy Federal Energy Management Program “Reviewing Post-Installation and Annual Reports for Federal ESPC [Energy Savings Performance Contract] Projects, Version 3.0,”** October 2007, states that “the purpose of this document is to provide a framework for implementing uniform and consistent reviews of Post-Installation and Annual Reports for Federal Energy Savings Performance

Contract projects. These procedures will allow for consistent evaluations of performance reports, produce standardized reviews, and enable centralized tracking of ongoing project performance.”

**Department of Energy Federal Energy Management Program “M&V [measurement and verification] Guidelines: M&V [measurement and verification] for Federal Energy Projects, Version 3.0,”** April 2008, states that “Government agencies are expected to witness baseline, post-installation, first-year, and annual M&V [measurement and verification] inspections and commissioning of installed ECMs [energy conservation measures], and approve required submittals in writing. This requires that the agencies designate individual(s) to observe these inspections, review the resulting M&V [measurement and verification] reports by the energy service company (ESCO), and certify in writing that those reports are acceptable to the agency.”

**DON Energy Program Business Plan** (Fiscal Year 2007). In the “Major Actions” section of the business plan, it states to “add measurement and verification to Utility Energy Services Contract delivery orders.”

**Navy and Marine Corps Energy Project Execution Guide**, November 2007, which “contains the standardized Naval Facilities Engineering Command (Naval Facilities Engineering Command) procedures, recommendations, and guidelines for developing and implementing energy and water conservation projects,” states:

- “All financed projects must include M&V [measurement and verification].
- “For ESPC [Energy Savings Performance Contract] contracts, the payments are contingent upon the M&V [measurement and verification] reports.” It further states that “M&V [measurement and verification] on ESPCs [Energy Savings Performance Contracts] is performed by the ESCO [energy service company] and reviewed by the Government. The level of M&V [measurement and verification] is negotiated between the Government and the ESCO [energy service company] and is specified in the contract. The appropriate level of M&V [measurement and verification] is driven by the types of ECMs [energy conservation measures] and technologies installed and the cost impact the M&V [measurement and verification] issues have on the project. These aspects are derived and refined during the project development phase. The ESCO [energy service company] is required for the duration of the project to perform the agreed M&V [measurement and verification] and submit annual reports to the Government, documenting that the energy savings are accruing in excess of annual payments.
- “A technical representative will be assigned to each energy project and will be an installation employee who will handle all technical issues associated with the project. The technical representative will be the point person for the receipt and review of the annual M&V [measurement and verification] reports.”

**Naval Facilities Engineering Command Business Management System B-5.1.3: “Financed Energy Project,”** January 2008, states “perform M&V [measurement and verification] of project performance.”

## **Exhibit C:**

# **Scope and Methodology**

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We began the audits of the Department of the Navy (DON) Energy Conservation Investment Program, Energy Savings Performance Contracts, and Utility Energy Services Contracts between 24 November 2009 and 30 April 2010. There were similar results for each audit, which we concluded were internal control weaknesses over performance assurance, validation and reporting processes, and project documentation. Due to this, we combined the audit results into one audit report. The decision to combine these three audits was made on 1 July 2010, and we conducted our audit work through 22 December 2010.

We reviewed Naval Audit Service, Department of Defense (DoD) Inspector General, and Government Accountability Office reports, and found there were no reports published in the past 5 years covering the Energy Conservation Investment Program or Utility Energy Services Contracts, therefore no followup was required. However, a Government Accountability Office report published June 2005 did include Energy Savings Performance Contracts, but we determined no followup was required because all recommendations were closed.

We evaluated internal controls and reviewed compliance with applicable Executive Orders, DoD, and DON guidance, and criteria related to the funding and financing of energy projects. We reviewed compliance with higher-level guidance and determined the existence of DON-wide guidance and regulations.

We conducted these performance audits in accordance with Generally Accepted Government Auditing Standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our finding and conclusions based on our audit objectives.

## **ENERGY CONSERVATION INVESTMENT PROGRAM**

We audited DON Energy Conservation Investment Program projects for Fiscal Years 2006 through 2011. We received a list of 110 planned, ongoing, and completed Navy and Marine Corps projects, valued at approximately \$150 million (with an estimated savings of about \$335 million). Naval Facilities Engineering Command Southwest Region had the largest number of projects at 45, valued at approximately \$52 million (with an estimated savings of about \$95 million). Given this judgmentally selected region, we randomly selected 30 of the 45 project costs valued at approximately \$33 million (with an estimated savings of about \$63 million for review). We did not

make any statistical projections to the universe of Energy Conservation Investment Program projects. These 30 Energy Conservation Investment Program projects were managed by 12 different installations to verify that the program had effective and efficient internal controls and oversight in place to achieve the DON savings to investment ratio/return on investment for existing and planned projects. The criterion reviewed pertained to the management of the projects and the development of their estimated actual savings.

We interviewed Office of the Secretary of Defense, Assistant Secretary of the Navy (Energy, Installations, and Environment) staff, and Navy and Marine Corps Commanding Officers, Program Managers, Project Managers, Energy Program Managers, Resource Efficiency Managers, and various responsible personnel about their processes for managing Energy Conservation Investment Program projects. We obtained copies of Life Cycle Cost Analyses, DD Forms 1391, spreadsheets, contract files, and other documentation, needed to verify projected estimated savings. We analyzed support for projects' expected savings to investment ratios/returns on investments. Return on investment is calculated based on gain from investment minus cost of investment divided by cost of investment.

We compared estimated planned Life Cycle Cost Analyses' project costs, savings to investment ratios and simple payback periods to DD Forms 1391, contract files, Naval Facilities Engineering Service Center files, and Congressional Notification reports submitted to Congress, and attempted to re-calculate verified savings. The data we gathered supported our finding and conclusions. We did not perform a system test on the Marine Corps and Naval Facilities Engineering Command systems. Therefore, we cannot attest to the accuracy of their databases.

### **ENERGY SAVINGS PERFORMANCE CONTRACT**

Naval Facilities Engineering Service Center provided the universe of 52 DON Energy Savings Performance Contracts awarded between Fiscal Years 1997 and 2009 from the Energy Project Status System. We judgmentally selected all 10 Naval Facilities Engineering Command Southwest Region Energy Savings Performance Contracts awarded between Fiscal Years 1997 and 2009 to determine if the projects generated sufficient savings from energy reductions to pay all contract costs and provided an acceptable return on investment. We conducted site visits at the projects' locations including: Naval Station San Diego, CA; Naval Base Ventura County (Point Mugu), CA; Naval Air Station Fallon, CA; Marine Corps Air Station Miramar, CA; Marine Corps Air Station Camp Pendleton, CA; and Marine Corps Air Ground Combat Center Twentynine Palms, CA. To determine if the savings covered all contract costs, we reviewed project documentation such as contracts, delivery/task orders and any modifications, measurement and verification reports, project payment documentation, and memorandums of agreement. Additionally, we interviewed installation, Specialty Center Acquisition, Naval Facilities Engineering Command, and Naval Facilities Engineering

Service Center personnel. During our installation site visits, we also observed the energy conservation measures at randomly selected buildings to verify their existence and operation.

We gathered data from the Energy Project Status System, but did not test the reliability of the data because there were no other systems against which to test the data. Additionally, we gathered data from the Centralized Expenditure and Reimbursement Processing System, but did not test the reliability of the data because this was outside the scope of the audit objectives.

### **UTILITY ENERGY SERVICES CONTRACTS**

We requested Naval Facilities Engineering Command to provide the universe of DON Utility Energy Services Contract projects awarded between Fiscal Years 1997 and 2009, in order to select a sample of projects that were likely to be at the beginning and the end of the typical payback period of 10 years. On 1 December 2009, Naval Facilities Engineering Service Center provided a universe of 188 DON Utility Energy Services Contract projects, with estimated implementation costs of about \$636 million, based on data from the Energy Project Status System, for projects awarded through Fiscal Year 2007, and based on data from spreadsheets, for projects awarded during Fiscal Years 2008 and 2009 while the Energy Project Status System was offline. We did not test the reliability of the data because there were no other systems against which to test the data.

We used the random number generator in Microsoft Excel to select a simple random sample of 64 out of the universe of 188 projects. The sample size was chosen based on a 95 percent confidence interval and a worst case precision of plus or minus 10 percent. As discussed in the audit finding, verified savings were available for only 2 of 64 sampled projects; therefore, we did not make any statistical projections to the universe of 188 projects.

The 64 selected Utility Energy Services Contract projects were administered by 6 Facilities Engineering Commands as follows: 20 by Naval Facilities Engineering Command Southeast, 18 by Naval Facilities Engineering Command Southwest, 9 by Naval Facilities Engineering Command Northwest, 9 by Naval Facilities Engineering Command Mid-Atlantic, 5 by Naval Facilities Engineering Command Midwest, and 3 by Naval Facilities Engineering Command Washington. We conducted site visits to the Facilities Engineering Commands where the sampled projects were located, to interview project managers and request project documentation to determine support for verified reduction in energy consumption by each sampled project. We reviewed contract documents for scheduled project costs and for requirements to conduct measurement and verification or alternate performance assurance. We attempted to compare any reported verified savings to project contract payments. In lieu of reported verified savings, we attempted to determine Facilities Engineering Command personnel's ability to calculate verified savings based on available project documentation, such as detailed supporting

matrices for estimated energy savings and evidence of project implementation. We searched the “DoD Electronic Document Access and Cash History On-line Operator Search Engine” for project contract and payment documentation.

**Exhibit D:**

# **Activities Visited and/or Contacted**

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## **ENERGY CONSERVATION INVESTMENT PROGRAM**

Office of the Under Secretary of Defense (Acquisition, Technology and Logistics),  
Washington, DC

Deputy Assistant Secretary of the Navy (Energy), Washington, DC

Commander, Navy Installations Command Headquarters, Washington, DC

Headquarters, Marine Corps, Arlington, VA

Naval Facilities Engineering Command Headquarters, Washington, DC

Naval Facilities Engineering Service Center, Port Hueneme, CA

Naval Facilities Engineering Command Southwest, San Diego, CA

Naval Base San Diego, CA

Naval Base Ventura County, Port Hueneme, CA

Marine Corps Air Station Miramar, CA

Marine Corps Air Station Camp Pendleton, CA

Marine Corps Base Camp Pendleton, CA

Marine Corps Air Ground Combat Center Twentynine Palms, CA

Naval Air Warfare Station China Lake, China Lake, CA

Naval Air Station Lemoore, Lemoore, CA

Naval Postgraduate School Monterey, Monterey, CA

Naval Weapons Station Seal Beach, Seal Beach, CA

Naval Base Point Loma, San Diego, CA

Naval Air Facility El Centro, El Centro, CA

### **ENERGY SAVINGS PERFORMANCE CONTRACT**

Deputy Assistant Secretary of the Navy (Energy), Washington, DC

Headquarters, Marine Corps, Arlington, VA

Naval Facilities Engineering Command Headquarters, Washington, DC

Naval Facilities Engineering Service Center, Port Hueneme, CA

Specialty Center Acquisition, Naval Facilities Engineering Command, Port Hueneme, CA

Naval Facilities Engineering Command Southwest, San Diego, CA

Naval Base San Diego, CA

Naval Base Coronado (Naval Amphibious Base Coronado, Naval Air Station North Island), CA

Naval Base Ventura County (Point Mugu), CA

Naval Air Station Fallon, NV

Marine Corps Air Station Miramar, CA

Marine Corps Air Station Camp Pendleton, CA

Marine Corps Air Ground Combat Center Twentynine Palms, CA

### **UTILITY ENERGY SERVICES CONTRACT**

Naval Facilities Engineering Command Headquarters, Washington DC

Naval Facilities Engineering Service Center, Port Hueneme, CA\*

Naval Facilities Engineering Command Washington, Washington, DC

Naval Facilities Engineering Command Southwest, San Diego, CA

Naval Facilities Engineering Command Southeast, Jacksonville, FL

Naval Facilities Engineering Command Northwest, Silverdale, WA

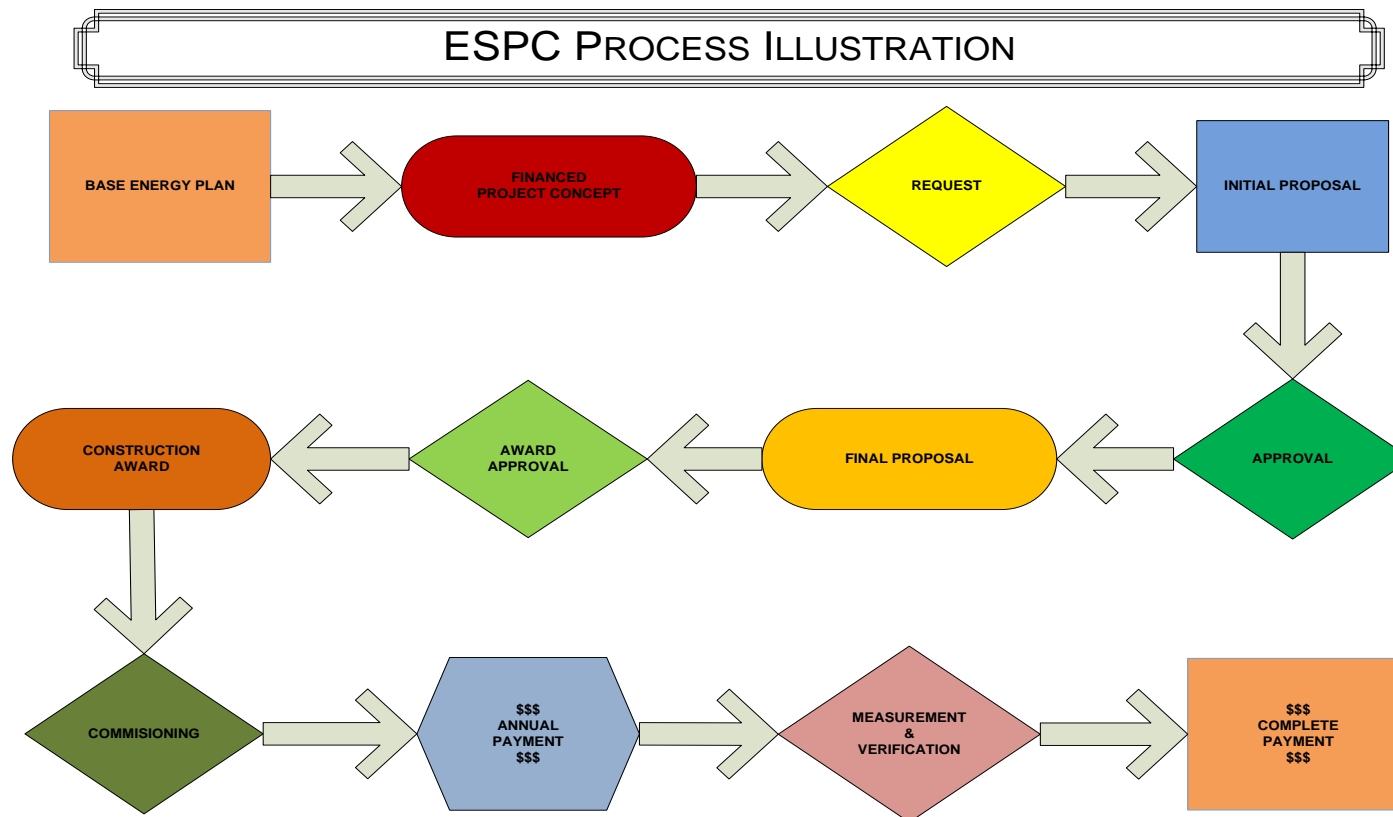
Naval Facilities Engineering Command Mid-Atlantic, Norfolk, VA

Naval Facilities Engineering Command Midwest, Great Lakes, IL

\*Activity contacted

**Exhibit E:**

# Energy Savings Performance Contract Process



**Exhibit F:**

# Energy Conservation Measures Included Under Each Funding/Financing Tool Reviewed


ECM Type	ESPC	UESC	ECIP
Lighting	X	X	X
Photovoltaic System	X	X	X
Facilities (Chillers/Boilers/Steam Generators/ Microturbines/ Cogeneration Plant)	X	X	X
HVAC	X	X	X
Sky lighting or window film/insulation	X	X	
Control Systems	X	X	
Air Compressor	X	X	X
Water Pumping/ Irrigation	X	X	X
Insulate Pipes	X	X	
Metering Equipment		X	
Vending Equipment		X	
Motors		X	
Water: Shower/Toilet/Faucet and Hot Water Heating		X	X
Unknown <sup>21</sup>		X	

Key to acronyms: ECIP - Energy Conservation Investment Program  
 ECM - Energy Conservation Measure  
 ESPC - Energy Savings Performance Contract  
 HVAC – Heating, Ventilation, and Air Conditioning  
 UESC - Utility Energy Services Contract

<sup>21</sup> The energy conservation measures were unknown due to lack of project documentation.

**Appendix 1:**

# Management Response from the Assistant Secretary of the Navy (Energy, Installations, and Environment)



DEPARTMENT OF THE NAVY  
THE ASSISTANT SECRETARY OF THE NAVY  
(ENERGY, INSTALLATIONS & ENVIRONMENT)  
1000 NAVY PENTAGON  
WASHINGTON DC 20350-1000

JAN 31 2011

MEMORANDUM FOR ASSISTANT AUDITOR GENERAL FOR  
INSTALLATIONS AND ENVIRONMENT AUDITS,  
NAVAL AUDIT SERVICE (NAVAUDSVC)

Subject: Draft NAVAUDSVC Report "Internal Controls Over DON Energy  
Funding and Financing Tools" (N2010-NIA000-0114; N2010-NIA000-  
0125; N2010-NIA000-0037)

Ref: (a) NAVAUDSVC memo, dated 22 Dec 10

Encl: (1) Assistant Secretary of the Navy (Energy, Installations, and  
Environment) responses to subject draft report recommendations

I have reviewed reference (a) and enclosure (1) provides our responses to  
the draft report recommendations.

The ASN (EI&E) technical point of contact is [REDACTED] Director for  
Shore Energy [REDACTED] The audit liaison point of contact is [REDACTED]  
DASN Energy Office [REDACTED]

[REDACTED]

[REDACTED]

Copy to:  
Chief of Naval Operation, United States Navy  
Commandant, United States Marine Corps

FOIA (b)(6)

FOIA (b)(6)

**Enclosure (1) Management Responses to NAVAUDSVC Recommendations**

Assistant Secretary of the Navy (Energy, Installations, and Environment) Response to  
NAVAUDSVC Draft Audit Report  
“Internal Controls Over DON Energy Funding and Financing Tools”  
(N2010-NIA000-0114; N2010-NIA000-0125; N2010-NIA000-0037)

We reviewed the draft audit report and concur with the findings and recommendations contained therein that relate to the Assistant Secretary of the Navy (Energy, Installations, and Environment). **Below are our responses to the recommendations addressed to Assistant Secretary of the Navy (Energy, Installations, and Environment).**

We recommend that the Assistant Secretary of the Navy (Energy, Installations, and Environment):

**Recommendation 1.** Update Secretary of the Navy Instruction 4100.9a, “Department of the Navy Shore Energy Management,” to establish policy regarding performance assurance, validating and reporting processes, and project documentation to ensure energy project costs and savings are verifiable.

**Management Response:** Concur. The DASN(Energy) will convene the Shore Energy Policy Board, whose membership includes CNO N46 and CMC LFF, to develop the new project assurance and validation policy and to implement the changes to SECNAV Instruction 4100.9A. Target completion date for submitting the revised instruction for the Navy documentation review is 31 March 2011.

**Recommendation 2.** Coordinate with Chief of Naval Operations and Commandant of the Marine Corps to implement the policy developed as a result of Recommendation 1.

**Management Response:** Concur. DASN (Energy) will coordinate the policy implementation with CNO N-46 and CMC LFF as part of the Shore Energy Policy Board development of the instruction changes. Target completion date for submitting the revised instruction for the Navy documentation review is 31 March 2011.

**Appendix 2:**

# Management Response from the Commandant of the Marine Corps



DEPARTMENT OF THE NAVY  
HEADQUARTERS UNITED STATES MARINE CORPS  
3000 MARINE CORPS PENTAGON  
WASHINGTON, DC 20350-3000

IN REPLY REFER TO:  
7510  
RFR-90  
3 Feb 11

From: Commandant of the Marine Corps  
To: Assistant Auditor General for Installations and  
Environment Audits, Naval Audit Service

Subj: COMMANDANT OF THE MARINE CORPS (CMC) OFFICIAL RESPONSE  
TO NAVAL AUDIT SERVICE (NAVAUDSVC) DRAFT REPORT  
N2010-0037, "INTERNAL CONTROLS OVER DON ENERGY FUNDING  
AND FINANCING TOOLS," DATED 22 DECEMBER 2010

Ref: (a) NAVAUDSVC memorandum 7510 N2010-NIA000-0114; N2010-  
NIA000-0125; N2010-NIA000-0037 of 22 Dec 10

Encl: (1) CMC Official Responses

1. Official responses required by reference (a) are provided at the enclosure.
2. Enclosure (1) was coordinated with Headquarters, U. S. Marine Corps, Programs & Resources and Installations & Logistics Departments.
3. An interim status report on the planned revisions to Marine Corps Order (MCO) P1100.9C noted in the responses to recommendations 3 and 4 will be provided by 3 August 2011.
4. The Marine Corps appreciates the opportunity to respond to the report.
5. If you have any questions about the responses, please contact [REDACTED] Headquarters, U. S. Marine Corps Senior Audit Liaison, email [REDACTED] or phone [REDACTED]

FOIA (b)(6)

[REDACTED]  
[REDACTED]  
Deputy Commandant  
for Programs and Resources

Copy to:  
DMCS

FOIA (b)(6)



DEPARTMENT OF THE NAVY  
HEADQUARTERS UNITED STATES MARINE CORPS  
3000 MARINE CORPS PENTAGON  
WASHINGTON, DC 20380-3000

BRADLY BAKER TO:  
11000  
LF  
JAN 13 2011

From: Assistant Deputy Commandant, Installations and Logistics (Facilities)  
To: Deputy Commandant, Programs and Resources Department, Audit and Review Branch (RFR)  
Subj: NAVAL AUDIT SERVICE (NAS) DRAFT REPORT DATED 22 DECEMBER 2010 PROJECT # N2010-NIA000-0114, N2010-NIA000-0125, N2010-NIA000-0037  
Ref: (a) Naval Audit Service (NAS) Draft Report Dated 22 December 2010 Project # N2010-NIA000-0114, N2010-NIA000-0125, N2010-NIA000-0037  
Encl: (1) Completed NAS Response Template

1. I appreciate the opportunity to respond to the recommendations proposed in the reference. The Energy Conservation Investment Program (ECIP) has been an important component in allowing the U.S. Marine Corps to take action towards more efficient energy and water usage and toward developing renewable energy resources.

2. As requested by the reference, responses are provided in enclosure (1).

3. HQMC LFF POC for this subject is [REDACTED] HQMC  
[REDACTED]

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FOIA (b)(6)

**NAVAL AUDIT SERVICE (NAS) DRAFT REPORT DATED 22 DECEMBER 2010  
PROJECT # N2010-NIA000-0114, N2010-NIA000-0125, N2010-NIA000-0037**

**“INTERNAL CONTROLS OVER DON ENERGY FUNDING AND FINANCING  
TOOLS”**

**UNITED STATES MARINE CORPS COMMENTS  
TO THE NAS RECOMMENDATIONS**

**RECOMMENDATION 3:** Establish processes and controls and provide oversight for conducting performance assurance on Energy Conservation Investment Program projects' achievement of energy reductions to include comparing verified savings with project costs.

**USMC RESPONSE:** The Marine Corps concurs with the recommendation and will institute the following corrective actions:

- MCO P11000.9C currently requires Installation Commanders to maintain auditable documentation on the execution status and the projected and realized savings for ECIP projects for the first 5 years of operation. By 30 March 2011, HQMC LFF will issue an interim instruction pertaining to ECIP projects requiring Installation Commanders to: (1) identify an appropriate measurement & verification process per the DOE, FEMP M&V Guidelines: Measurement and Verification for Federal Energy Projects, (2) maintain auditable documentation on realized savings over the operating life of the equipment and (3) report project performance to HQMC LFF annually.
- During February and March 2011, at our Annual Facilities Energy Summits, HQMC LFF will provide training on the requirement to establish a measurement & verification process for ECIP projects to energy management personnel from the Marine Corps Installations Commands and their respective installations. The objectives for these summits are to create a sustained leadership focus to provide program oversight and accountability, provide a forum to share information on energy program management, energy saving technologies, and measures for new buildings and building retrofits, and develop program direction to integrate energy efficiency and water conservation requirements into daily operations and long-term programs.
- MCO P1100.9C will be revised to reflect the interim instruction pertaining to the management of ECIP projects by 30 March 2012.

**RECOMMENDATION 4:** Establish controls and provide oversight to ensure auditable Energy Conservation Investment Program documentation is retained (to include original and updated documentation for DD Forms 1391 and/or Life Cycle Cost Analyses to support Savings to Investment Ratio/Return on Investment).

**USMC RESPONSE:** The Marine Corps concurs with the recommendation and will institute the following corrective actions:

- MCO P1100.9C currently requires Installation Commanders to submit project documentation including a Life Cycle Cost Analysis (LCCA) to HQMC LFF for each ECIP Project. By 30 March 2011, HQMC LFF will issue an interim instruction pertaining to ECIP projects, which will: (1) detail the format and content required for FORM 1391, (2) establish the requirement for a Cost Estimate (NAVFAC 11013/7 or a similar form), (3) provide guidance for developing a LCCA per 10 CFR 436, Subpart A, "Methodology and Procedures for Life Cycle Cost Analysis," and (4) direct Marine Corps Headquarters, Marine Corps Regional Installations Commands and Installation Commanders to retain project documentation over the operating life of the equipment.
- During February and March 2011, HQMC LFF will provide training to energy management personnel from Marine Corps Installations Commands and their respective installations at our Annual Facilities Energy Summits concerning the requirement to develop and retain project documentation. This brief will provide a clear description of the level of detail necessary to provide a thorough understanding of the existing situation and how the proposed project will make improvements. This will ensure that reviewing organizations clearly understand the project scope and expected results.
- MCO P1100.9C will be revised to reflect the interim instruction pertaining to the management of ECIP projects by 30 March 2012.

**INFORMATION TO BE WITHHELD FROM RELEASE TO THE PUBLIC  
UNDER FOIA:** None

**Appendix 3:**

# Management Response from the Commander, Naval Facilities Engineering Command



DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
1322 PATTERSON AVENUE, SE SUITE 1000  
WASHINGTON NAVY YARD DC 20374-5005

7500  
Ser IG2/006  
8 Feb 11

From: Commander, Naval Facilities Engineering Command  
To: Assistant Auditor General for Installations and Environment Audits, Naval  
Audit Service

Subj: MANAGEMENT RESPONSE TO NAVAUDSVC CONSOLIDATED AUDIT  
REPORT N2010-NIA000-0114, N2010-NIA000-0125, N2010-NIA000-0037  
INTERNAL CONTROLS OVER DON ENERGY FUNDING AND FINANCING  
TOOLS.

Encl: (1) Commander, Naval Facilities Engineering Command response to  
subject draft report

1. We reviewed the subject report and enclosure (1) provides our responses to the  
recommendations.

2. The NAVFAC audit liaison point of contact is [REDACTED] The  
NAVFAC technical point of contact is [REDACTED]

[REDACTED]  
Inspector General

FOIA (b)(6)

FOIA (b)(6)

**AUDIT RESPONSE TO NAVAL AUDIT SERVICE  
N2010-NIA000-0114, N2010-NIA000-0125, N2010-NIA000-0037**

**Internal Controls Over DON Energy Funding and Financing Tools**

**AUDIT AGENCY RECOMMENDATION #5:** Establish DoN Energy Conservation Investment Program and Utility Energy Services Contract processes and controls. Provide oversight for conducting performance assurance on energy projects' achievement of energy reductions to include comparing verified savings with project costs.

**NAVFAC RESPONSE:** Concur.

NAVFAC has developed a Plan of Action & Milestones to address this Recommendation. Key milestones within our overall plan to correct this deficiency include: (1) By 28 February 2011, publish immediate interim guidance to field teams so that they are aware of the performance verification requirement and have the basic information to begin immediately capturing baseline data and incorporating technical requirements for performance verification on current year (FY11) projects; (2) By 30 September 2011, update existing Business Management System (BMS) processes that relate to energy projects to include savings measurement & verification (M&V) roles, responsibilities, and requirements, including oversight; (3) By 30 June 2011, develop and deploy field training on best practices for tracking and documenting energy project savings; (4) By 30 September 2011, develop a comprehensive new BMS process dedicated to energy savings (M&V) as it applies to the different types of energy projects; and (5) By 30 July 2011, develop a conference session dedicated to sharing experiences and lessons learned in energy savings documentation to be conducted at the annual GovEnergy Symposium in August. Additional oversight will be provided through the IG Inspection process, which annually verifies adherence to the standard processes as part of the self-assessment in preparation for Manager's Internal Control Program Statement of Assurance and as part of the triennial on-site inspection, where each business line is evaluated.

**AUDIT AGENCY RECOMMENDATION #6:** Establish processes and controls and provide oversight for reporting achievement of annual verified energy reductions for each Energy Conservation Investment Program and Utility Energy Services Contract energy project.

**MANAGEMENT RESPONSE:** Concur

The Department of Energy (DOE) created a database that all federal agencies are required to use for capturing and reporting performance verification of energy projects. NAVFAC will develop internal processes and controls and provide oversight of the reporting to the DOE database. DOE was scheduled to distribute guidance for input to the database by 31 January 2011. After receiving the guidance, NAVFAC will set up users within 30 days and provide Navy users with instructions within 60 days. M&V data on projects will be produced by 31 December 2011 for projects with prior FY M&V

Enclosure (1)

plans. Energy managers will have 30 days to review and comment on the data. Regional Energy Managers will provide oversight of inputs by installation level Energy Managers. At a minimum, inputs will be reviewed annually as part of the Annual Energy Management Report submission. In accordance with DOE guidance, Energy managers will report M&V results by 31 May 2012 for those projects and note any discrepancies that require resolution. Beginning in FY12, all energy projects will have M&V plans and performance of these projects will be reported by 31 May of the following FY and annually thereafter.

**AUDIT AGENCY RECOMMENDATION #7:** Establish processes and controls and provide oversight for ensuring auditable Energy Conservation Investment Program and Utility Energy Services Contract energy project documentation is retained to include support for original, updated, estimated, and verified savings and costs.

**MANAGEMENT RESPONSE:** Concur.

By 30 June 2011, NAVFAC will develop and deploy field training on best practices for tracking and documenting energy project savings.

By 30 September 2011, NAVFAC will update existing BMS processes that relate to energy projects to include M&V roles, responsibilities, requirements, and oversight, and add procedures requiring the technical lead and contracting officer to collaborate in determining the required documentation relevant to maintaining the accuracy and completeness of contract files from requirement generation through final payment. At a minimum, documentation shall include original and updated, estimated and verified savings and costs. Acquisition will retain all contract files for a minimum of 6 years and 3 months after final payment.

By 30 September 2011, NAVFAC will develop a list of required energy project documentation, including required length of retention and requirement to update documents during life of project as well as add additional oversight of Utility Energy Service Contracts (UESCs) to the Procurement Performance Management & Assistance Program (PPMAP) to ensure that acquisition personnel are conducting reviews of UESCs and retaining required documentation in the contract files for the required amount of time. At a minimum, documentation shall include original and updated, estimated and verified savings and costs.

By 30 September 2011, NAVFAC will develop a comprehensive new BMS process dedicated to energy savings M&V that includes roles, responsibilities, requirements, and oversight as it applies to the different types of energy projects. M&V data on projects will be produced by 31 December 2011 for projects with prior FY M&V plans. Energy managers will have 30 days to review and comment on the data. In accordance with DOE guidance, Energy managers will report M&V results by 31 May 2012 for those projects and note any discrepancies that require resolution. Beginning in FY12, all energy projects will have M&V plans and performance of these projects will be reported by 31 May of the following FY and annually thereafter.

Oversight will be provided through the IG Inspection process, which annually verifies adherence to the standard processes as part of the self-assessment in preparation for Manager's Internal Control Program Statement of Assurance and as part of the triennial on-site inspection, where each business line is evaluated.

**AUDIT AGENCY RECOMMENDATION #8:** Establish detailed procedures to verify the accuracy of the measurement and verification reports for Energy Savings Performance Contract projects. At a minimum, Naval Facilities Engineering Command personnel should document and retain documentation supporting that they have reviewed the measurement and verification reports for accuracy.

**MANAGEMENT RESPONSE:** Concur.

NAVFAC is completing work on a Lean Six Sigma (LSS) effort to streamline the Energy Savings Performance Contract (ESPC) process. As part of that LSS, detailed M&V validation procedures will be incorporated. M&V procedures are included in Step 8 of the 9-step ESPC process. The revised procedures will be finalized by 31 March 2011. The new process will be standardized within NAVFAC by incorporating it into the existing BMS for ESPC projects. The process will include tracking, documenting, and retaining of all M&V report validations.

**AUDIT AGENCY RECOMMENDATION #9:** Provide oversight to ensure that Naval Facilities Engineering Command personnel adhere to the procedures in Recommendation 8.

**MANAGEMENT RESPONSE:** Concur.

When the LSS effort is complete and the BMS is revised by 31 March 2011, it will be the standard NAVFAC process. Adherence to standard processes is verified through the PPMAP and NAVFAC Inspector General (IG) Inspection process. The PPMAP rotates through all acquisition components in NAVFAC, verifying compliance with procedures required by policy or regulation as identified in the BMS. Each acquisition component reports annually through its internal business assessment and receives individual compliance attention if needed. In addition, the IG Inspection process verifies adherence to the standard processes annually as part of the self-assessment in preparation for Manager's Internal Control Program Statement of Assurance and as part of the triennial on-site inspection, where each business line is evaluated.

**AUDIT AGENCY RECOMMENDATION #10:** Comply with Department of Defense Instruction 4170.11 and provide oversight to Naval Facilities Engineering Command personnel to ensure payments for Energy Savings Performance Contract projects are based on the receipt, verification of accuracy, and acceptance of the annual measurement and verification reports.

**MANAGEMENT RESPONSE:** Concur.

For ESPC projects, DODI 4170.11 requires that "Payments may be made only when the project is determined to be life cycle cost effective and when actual savings generated from the financed project exceed the payment amount in the same year. By revising and adhering to the BMSs identified in other recommendation responses, NAVFAC will

ensure M&V reports are received, validated, and retained to comply with the DODI. BMSs will be in place by 31 March 2011. Initial M&V validation will be performed within 18 months of project acceptance and annually thereafter for the life of the contract. Additionally, by 31 March 2011, NAVFAC will request clarification from the Deputy Assistant Secretary of the Navy for Energy with respect to making payments prior to M&V validation and will incorporate the response into BMS's.

**AUDIT AGENCY RECOMMENDATION #11:** Establish processes and controls and provide oversight to ensure that the Naval Facilities Engineering Command personnel conduct reviews of Utility Energy Services Contract files for completeness throughout the payment schedule of the project, retaining the complete file until 6 years and 3 months from final payment in accordance with the Federal Acquisition Regulation.

**MANAGEMENT RESPONSE:** Concur.

By 30 September 2011, NAVFAC will add procedures to the UESC BMS process to require the technical lead and contracting officer to collaborate in determining the required documentation relevant to maintaining the accuracy and completeness of contract files from requirement generation through final payment. Acquisition will retain ALL contract files for a minimum of 6 years and 3 months after final payment. By 30 September 2011, NAVFAC will also add additional oversight of UESCs to the PPMAP to ensure that the NAVFAC acquisition personnel are conducting reviews of UESCs and retaining required documentation in the contract files for the required amount of time.

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